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# *The Bulletin of the University of Minnesota*

*General Extension Division  
Announcement of Evening Courses  
1922-1923*



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## CALENDAR

1922-1923

1922

September	18-23	Week	Registration week
September	25	Monday	Regular class work begins
November	30	Thursday	Thanksgiving Day; a holiday
December	23	Saturday	Christmas recess begins

1923

January	2	Tuesday	Class work resumed
January	22-26	Week	Examination week, first semester
January	26	Friday	First semester ends
January	29	Monday	Second semester begins
May	21-25	Week	Examination week, second semester
May	25	Friday	Second semester ends

# GENERAL EXTENSION DIVISION

## FACULTY

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CHESTER C. CRELLIN, Instructor in Railway Traffic and Rates  
W. IRVING CROWLEY, B.A., Instructor in Romance Languages  
JOSEPH E. CUMMINGS, M.A., Instructor in Economics  
ALVIN S. CUTLER, C.E., Professor of Railway Engineering  
JAMES DAVIES, Ph.D., Assistant Professor of German  
LYNWOOD G. DOWNS, M.A., Instructor in German  
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- JAMES H. FORSYTHE, M.A. in Arch., Associate Professor of Architecture
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- EDWARD J. KENNY, B.A., LL.B., Instructor in Business Law
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- SAMUEL KROESCH, Ph.D., Assistant Professor of German
- JOHN H. KUHLMAN, B.A., B.E., Instructor in Electrical Design
- MAURICE B. LAGAARD, C.E., Assistant Professor of Structural Engineering
- FRED C. LANG, C.E., Assistant Professor of Highway Engineering
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NORMAN WILDE, Ph.D., Professor of Philosophy

JEREMIAH S. YOUNG, Ph.D., Professor of Political Science

OTTO S. ZELNER, B.S., (C.E.), Assistant Professor of Surveying

## EXTENSION SERVICE

The Extension Service of the University of Minnesota is organized to include:

A. Evening classes, in Minneapolis, St. Paul, Duluth, and other cities.

1. Courses leading to credit in the College of Science, Literature, and the Arts, in the College of Education, and in the School of Business.
2. Courses in business administration, accounting, and finance.
3. Practical courses in engineering and in industrial subjects.

B. Correspondence courses.

C. Extension lectures, singly or in groups, and lyceum lectures, concerts, and entertainments.

D. The Municipal Reference Bureau, which compiles and furnishes to city officials information pertaining to municipal government and administration.

E. The Bureau of Visual Instruction, through which loan collections of lantern slides and films are furnished to schools and clubs.

F. Drama Service, through which dramatic clubs and school societies are given advice about the production of amateur theatricals, and copies of plays are lent for reading and selection.

G. Community Service, through which the elements making up a community and its trading fringe are given advice and assistance for bringing together all the social forces into an organization whose purpose shall be to make the people healthy and wealthy and wise.

H. Agricultural Extension, including lectures, demonstrations, institutes, and short courses under the direction of the College of Agriculture, Forestry, and Home Economics.



# EVENING EXTENSION COURSES

## GENERAL INFORMATION

The General Extension Division is that part of the University which is organized to meet the needs of persons who are unable to matriculate and enroll as full-time students in the University. It organizes and directs late afternoon and evening courses in any part of the state where there is sufficient demand. Where the organization of classes is not practicable, correspondence courses are offered. Thus the opportunity is presented to persons engaged in vocational occupations, to pursue certain subjects included in a liberal or vocational education and to have these subjects credited toward an academic degree. It is understood that students desiring credit must meet the academic entrance requirements. For those whose preparation is incomplete, the opportunity is offered to make up the deficiencies and to continue with the regular course.

## ADMISSION

It is not intended that any regulation should debar from the privilege of these courses any person who can pursue them profitably. Those persons desiring credit toward an academic degree must comply with the regulations governing such degree. Those not desiring credit will be admitted, provided they are sufficiently mature (more than eighteen years of age) and can satisfy the department in which they wish to study that they are able to carry the work profitably to themselves and without hindrance to the classes. Students may attend any class once before registering. All classes are open to both men and women.

## REGISTRATION

Students should register at the executive offices before the second meeting of the class in which they expect to enroll. Such offices are located in Minneapolis, St. Paul, and Duluth. See page 12 for location of these offices. A class card will be given to the student at that time which must be presented to the instructor.

In places where no such offices exist students will register with the instructor.

No student will be regarded as registered in any class until he has paid the required fee and presented his class card to the instructor.

Students are urged to enroll in advance for all evening extension classes.

## CREDIT FOR EXTENSION COURSES

Credit toward a degree will be given students who satisfy the entrance requirements of the college in which credit is desired and who successfully complete any of the extension courses of university grade. This applies to all the courses listed under academic or collegiate courses,



unless otherwise specified. It also applies to nearly all the business courses. A few courses listed under engineering carry credits. Credit in any extension course will be awarded only to those students who pass the final examinations of that course. Such credits will be recorded when the student has matriculated and established a record in the University. Courses requiring one evening (two hours) a week for recitation normally carry 2 semester credits. Those requiring more time usually carry correspondingly more credit. In the Extension Division credits are still reckoned on the semester, not on the quarter, basis. The school year is divided into two semesters of sixteen weeks each, with an extra week devoted to examinations. Normally each class meets one night a week for two hours.

The statement concerning credit for the certificates in accountancy, in finance, in general business, and in engineering will be found on pages 29, 30, 31, 42, 43, and 44.

*Students must indicate at the time of registration whether or not they desire university credit in the courses pursued.*

*Regulations Concerning Credit in the College of Science,  
Literature, and the Arts*

1. All courses for which credit is given in the "College of Science, Literature and the Arts" must be authorized with the credits by the Advisory Committee. But credit shall be given only to those extension courses which are conducted in essentially the same manner as the corresponding courses in the University and which are carried on under similar conditions as to attendance, term's work, quizzes, and examinations.

2. Each credit course shall be directly in charge of a member of the faculty.

3. Any regularly enrolled University student successfully completing an approved course shall receive the appropriate credit.

4. Any person shall receive a certificate upon satisfactorily completing an approved course. The certificates entitle the holder to the corresponding University credits whenever he has earned 30 credits in residence. The registrar or the Students' Work Committee, shall in all cases pass upon the qualifications of the student.

5. The maximum credit towards a degree for work done in extension courses shall not exceed one half the unit hours required for graduation.

6. Credit for an amount not exceeding one quarter of the unit hours required for graduation may be given at the University of Minnesota to students of such other extension schools or departments as may be approved by the Advisory Committee, provided that such credit shall be subject to the same provision as govern credits in the General Extension Division of the University of Minnesota.

## RESIDENT STUDENTS

1. No University student may enroll for extension courses for the purpose of removing a condition or failure.

2. No University student may enroll for an extension course if this would increase his credit hours beyond what the rules allow.

3. Any University student who wishes to enroll for an extension course must first obtain the approval of the dean of his college.

## EXAMINATIONS

Examinations in all of the subjects given are conducted during the last week of each semester. All students who are eligible for credit and desire it must pass these examinations.

Condition examinations will be conducted at the convenience of the instructors. Students having conditions must pass a condition examination within thirty days after the beginning of the semester following that in which the condition was received. A fee of \$1 is charged for each examination.

## FEES

The fee charged for extension classes is five dollars (\$5) a credit hour. The fee for each course is stated in the program of classes.

In case a student takes three or more courses simultaneously a reduction of ten per cent (10%) is made in the total fee.

The fee does not include the cost of texts or materials. The cost of these items varies from \$1 to \$3 a class.

All fees are payable at the time of registration, and registration should not be deferred longer than the second meeting of any class. Checks should be made payable to the University of Minnesota.

## REFUNDS

Students who cancel their registration before the middle of any semester may obtain a *pro rata* refund of the tuition fee, provided notice is given the office of the Extension Division at the time of cancellation. No refund is made after the eighth week of a semester. In no case will a refund be made to a student of a class organized on a minimum registration basis. Two dollars (\$2) of each fee is the non-refundable portion withheld to cover expenses of registration.

## CLASS ATTENDANCE

Every student should attend the meetings of his class regularly. For credit toward a degree or a certificate the following rule must be adhered to:

No student whose absences exceed three (3) of the regular scheduled sessions of the course for a semester shall be admitted to the final examination of the course without special permission of the director of University Extension.

## REPORTS OF STUDENTS

Reports of students' work and grades are sent to the office of the registrar of the University at the close of each semester. A report of the grade and credit earned is sent from that office to the student. This information will not be given out at the office of the Extension Division.

## LENGTH OF COURSES

The majority of courses meet one evening a week for two hours for a period of sixteen weeks, with an additional week for final examination. Certain of the courses, notably those in modern languages, will meet twice a week for a like period.

The courses meeting once a week normally carry two semester credits and those meeting twice a week, four semester credits.

## TIME OF MEETING

The time of meeting of the classes is stated in the program. Ordinarily the classes will meet at 6:30 and 7:30 p.m., but a suitable time will be scheduled for any group.

## PLACE OF MEETING

The Minneapolis classes meet at the University, the Minneapolis City Hall, and the several schoolhouses. The St. Paul classes meet at the St. Paul City Hall, the Public Library, and also in schoolhouses. The Duluth classes meet in the St. Louis County Courthouse. In other places the classes will meet in such suitable quarters as may be obtained.

The exact place of meeting of each class will be announced in the program of classes.

## SIZE OF CLASSES

Classes will not be organized for a smaller enrolment than fifteen. Under exceptional circumstances some continuation classes will be conducted for a minimum of twelve students. However, it should be understood that in some classes a larger registration will be required. Variations of the above rule will be made only at the discretion of the advisory committee of the Extension Division.

Any course announced may be withdrawn if the registration for that particular course is considered insufficient. In the case of withdrawal of any course the full fees paid will be refunded.

## PROGRAM OF CLASSES

Folders will be issued about September 10, giving the program of classes and schedules of meeting places. It should be understood that not all the courses listed in this bulletin are given in any one year. Final announcement may be found in the special folder. Folders will be issued for the collegiate courses, the business courses, and the engineering courses.

## GENERAL EXTENSION DIVISION OFFICES

The general Extension Division maintains the following offices where full information and bulletins may be obtained. Registrations in all courses will be made at these offices.

Minneapolis: Room 312, Security Building, telephone, Main 0624.  
Room 5, Main Engineering Building, University Campus, telephone Dinsmore 2760.

St. Paul: Room 808, Pioneer Building, telephone Cedar 7312.

Duluth: Room 301, Alworth\* Building, telephone Melrose 7900.

# COURSES OF INSTRUCTION

## DEPARTMENT OF COLLEGIATE INSTRUCTION

The following courses are offered extension students with two purposes in view: First, an opportunity is afforded those who are candidates for degrees, but who are unable to pursue their entire college course in regular residence, to complete a part of their work while otherwise occupied during the day.

Second, the advantage of university training in cultural subjects is offered those who can devote one or more evenings a week to such work, regardless of any desire for university credit.

The General Extension Division is now prepared to offer the following evening courses. Others will be given provided a sufficient registration is assured, usually fifteen. Those interested in forming such classes are advised to correspond with the director.

A special folder announcing specific dates and places for holding classes will be issued early in September. This folder, containing the class program, will be sent to all requesting it.

For statement regarding fees, registration, absences, credit, etc., see under heading, General Information, in this bulletin.

(The numbers in parentheses indicate the corresponding course numbers in the regular college bulletins.)

## DESCRIPTION OF SUBJECTS

### AMERICANIZATION TRAINING AND ANTHROPOLOGY

#### THE AMERICAN PEOPLE

- 1 (113). OLDER IMMIGRANTS. Characteristics, contributions, and distribution of the older immigrant peoples in America, their modification and importance to us. Two credits (one evening a week); first semester. MR. JENKS.
- 2 (114). NEWER IMMIGRANTS. Characteristics, contributions, and distribution of the newer immigrant peoples in America, their modification and importance to us. Two credits (one evening a week); second semester. MR. JENKS.
- 3 (115). AMERICANISMS AND ASSIMILATION. Essential and unique historical Americanisms and their value and virility for the future in America. Conditions and facts of assimilation. Two credits (one evening a week); second semester. MR. JENKS.

#### ART

1. ART APPRECIATION—ANCIENT AND MEDIEVAL. This is a cultural rather than a technical course, leading to the appreciation of architecture,

sculpture, and painting as an expression of the civic and intellectual activities of the time in which the artist lived. Sixteen two-hour lectures illustrated with lantern slides. One hour required reading to supplement each lecture. Two College of Education credits (one evening a week); first semester.

2. ART APPRECIATION—RENAISSANCE AND MODERN. This is a cultural rather than a technical course, leading to the appreciation of architecture, sculpture, and painting as an expression of the civic and intellectual activities of the modern period. Sixteen two-hour lectures, illustrated with lantern slides. One hour required reading to supplement each lecture. Two College of Education credits (one evening a week); second semester.
3. FREEHAND DRAWING. Drawing and painting from life and from casts, with lectures on the construction of the human figure and its application to decoration. Students completing both semesters will be taught how to make etchings. (One evening a week); both semesters.

#### ASTRONOMY

- 1 (11). DESCRIPTIVE ASTRONOMY. Lectures and recitations on the general principles and fundamental facts of astronomy. Illustrated by lantern slides, simple problems, naked-eye and telescopic observations. Two credits (one evening a week); both semesters. MR. BEAL.

#### CHEMISTRY

1. GENERAL INORGANIC CHEMISTRY—THE NON-METALS. A study of the common non-metallic elements and their principal compounds, with discussions of the laws and theories of chemistry. Three and one-third credits. One lecture, one recitation, and three hours laboratory work per week. TTh; 7:30-10:00. First semester. MR. GEIGER.
2. GENERAL INORGANIC CHEMISTRY AND QUALITATIVE ANALYSIS—THE METALS AND QUALITATIVE ANALYSIS. A study of the common metallic elements and their principal compounds, with a further discussion of the laws and theories of chemistry, and systematic qualitative analysis. One lecture, one recitation, and three hours laboratory work per week. Open to students who have completed Course 1 or its equivalent. Three and one-third credits. Second semester. MR. GEIGER.

#### ECONOMICS

1. ELEMENTS OF ECONOMICS. For description, see Department of Business Instruction. (One evening a week); first semester.
2. ECONOMIC PROBLEMS. For description, see Department of Business Instruction. (One evening a week); second semester.



## EDUCATION

1. **EDUCATIONAL SOCIOLOGY.** This course is designed to explain, from the sociological standpoint, what the aims of education are, and what subjects are of most value. Also it is designed to show how education can predetermine the institutions of the future. Two credits (one evening a week); both semesters. MR. FINNEY.

## VOCATIONAL AND INDUSTRIAL

(The following nine courses not given in 1922-1923.)

1. **METHODS OF ESTABLISHING TRAINING DEPARTMENTS IN FACTORIES AND STORES.** This is a course for foremen, superintendents, and other executives in the organization and establishment of training departments and "vestibule schools" as a part of scientific management and the employment system. This course will be so arranged that each member of the class will at the end of the course be in possession of the complete data necessary for the establishment of such courses in his own organization. No credit (one evening a week); first semester.
2. **SHEET-METAL PATTERN-DRAFTING FOR TINSMITHS AND SHEET-METAL WORKERS.** This is a practical course of real problems and development of patterns and of forms and types of sheet metal work. For boilermakers, coppersmiths, tinsmiths, and automobile-body men. The course is divided into the following progressive units: (1) development of patterns by orthographic projection; (2) by the use of parallel lines; (3) by means of radial lines; (4) by triangulation; (5) approximation; (6) templates. Students will be encouraged to bring in practical problems from their everyday work. No credit (one evening a week); first semester.
3. **SCIENTIFIC METHODS OF HANDLING AND TESTING LABOR.** This is a practical course covering the development of scientific methods in handling and testing labor. A complete study will be made of the three groups of tests used. Practical illustrations from plants using these tests. The students of this class will be encouraged to apply the class work to their own particular situations. No credit (one evening a week); second semester.
4. **CAUSES OF AND CURES FOR INDUSTRIAL UNREST.** An analytical study is made of the fundamental causes of various types of industrial unrest and the remedial measures that have been taken by various organizations. The work of this class will be from the standpoint of the administrator and executive. No political panaceas will be discussed. No credit (one evening a week); second semester.
5. **BUSINESS AND FACTORY MANAGEMENT I.** The first part of this course deals with the origins of present practices in management, the under-

- lying principles of efficiency in management, the several forms of organization. Part I is prerequisite to Part II. No credit (one evening a week); first semester.
6. BUSINESS AND FACTORY MANAGEMENT II. The second part deals with the more specific details of management, such as scientific management, business cycles, methods of control, selection of personal incentives and rewards, labor problems, etc. No credit (one evening a week); second semester.
  7. FOREMAN'S COURSE IN METHODS OF HANDLING LABOR. The aim of this course is to develop in the foreman the scientific point of view in regard to the various problems of handling labor of various kinds as related to production. Some of the detailed lessons are: evolution of the factory system, functional foremanship, testing of trade knowledge and skill, psychology of the worker, job analysis, personnel analysis, and the foreman as an instructor. No credit (one evening a week); both semesters.
  8. EMPLOYMENT MANAGEMENT I. The first part of this course deals with the significance of employment management as a part of our evolving industrial civilization, its relation to scientific management, and the organization and functions of an employment department. Part I is prerequisite to Part II. No credit (one evening a week); first semester.
  9. EMPLOYMENT MANAGEMENT II. The second part deals in detail with the several functions of the employment department, such as: sources of labor supply, interviewing, scientific selection of men, wage systems, training the worker, labor audits, labor turnover, psychology of the worker, and modern industrial movements. No credit (one evening a week); second semester.

### ENGLISH

- 1 (1-2-3). GENERAL SURVEY OF ENGLISH LITERATURE. Lectures, recitations, and assigned reading. Designed to prepare for more minute study of special periods. Two credits (one evening a week); first semester.
- 2 (1-2-3). GENERAL SURVEY OF ENGLISH LITERATURE. A continuation of Course 1. Two credits (one evening a week); second semester.
- 3 (8). SHAKESPEARE. An introductory study of Shakespeare's development as a poet and dramatist up to *King Lear*, with readings of representative plays. Two credits (one evening a week); second semester. MR. RARIG.
- 4 (44-45). AMERICAN LITERATURE. Lectures on American literature with extensive readings from the principal poets and prose writers of the United States. Little attention is paid to the novelists in this course.

Two credits (one evening a week); first semester. MR. MOORE, MR. NICHOLS.

- 5 (109-110). THE ROMANTIC POETS. A study of the Romantic School of poets from Wordsworth to Keats, and the influence of the French Revolution upon them. Two credits (one evening a week); first semester.
- 6 (151). RECENT POETRY. Poetry in England and America since the death of Queen Victoria. The main tradition and tendencies now prevailing. Two credits (one evening a week); second semester. MR. BEACH.
- 7 (55). THE AMERICAN NOVEL. The beginnings of the American novel and short story and their development to about 1865. Among the writers included are Charles Brockden Brown, Irving, Cooper, Poe, Hawthorne, Thomas Bailey Aldrich. Two credits (one evening a week); second semester. MR. MOORE.
8. THE ENGLISH NOVEL. This course will deal with the history of the novel from its beginning to the close of the nineteenth century, with, if time permits, some work on twentieth-century fiction. Lectures, class discussions, and occasional reports, together with the required reading of at least ten novels. Two credits (one evening a week); both semesters. MISS CHASE.
9. MODERN FRENCH AUTHORS. A study of the French authors of the nineteenth century in English. No credit (one evening a week); first semester. MR. SEARLES.

## GERMAN

1. BEGINNING GERMAN. Pronunciation, grammar, conversation, and composition; selected reading in easy prose and verse. Eight credits (two evenings a week); both semesters. Open to all who have had no German. Both semesters must be completed before credit is given for the first semester. MR. KROESCH.
2. ELEMENTARY CONVERSATION. Conversation on topics of everyday life, aiming at fluency in the use of idiom. Not a course in composition. Organized on the laboratory basis—one hour credit with two hours recitation and at least one hour of outside preparation. Intended for those who have had at least one year of German. Two credits (one evening a week); both semesters. MR. DAVIES.
3. RAPID READING. Short stories and dramas by Storm, Heyse, Baumbach, Lessing, Goethe, Schiller, Hebbel, and Sudermann. Class work and discussions are conducted in German. Open to all who have had at least one year of German. Four credits (one evening a week); both semesters. MR. DOWNS.

4. **COMMERCIAL GERMAN.** Oral use of the language. Practical vocabulary. In the second semester attention will be given to business correspondence. Open to all with two years German. Both semesters must be completed before credit is given for the first semester. Eight credits (two evenings a week) ; both semesters. MR. BURKHARD.

### GREEK IN ENGLISH

1. **GREEK MYTHOLOGY.** No knowledge of Greek is required for this course. A course of lectures and reading dealing with the legends and myths which appear in the literature and art of ancient Greece. The quaint and beautiful stories of Greek gods and heroes found in Homer and in the tragic and lyric poets will be presented and interpreted, and the whole course will be richly illustrated with the stereopticon. The origin and evolution of the myth, its relation to Greek literature, philosophy, and religion, and its influence upon later literature, will also be touched upon. Two credits (one evening a week) ; first semester. MR. SAVAGE.
2. **GREEK LITERATURE AND LIFE.** This is a course dealing with the literature, life, and art of the ancient Greeks, for which no knowledge of Greek is required. The course consists of lectures and illustrative readings by the instructor and assigned readings in translation and textbook work by the class ; conferences and informal discussions will also be held. The character and influence of Greek culture, especially along the lines of literature, philosophy, and art, will be discussed ; and the whole course will be richly illustrated with the stereopticon. Especially designed for those interested in language and literature. Two credits (one evening a week) ; second semester. MR. SAVAGE.

### GREEK

- 1 (1-2-3). **BEGINNING GREEK.** Grammar, oral and written exercises, and translation of simple prose. Eight credits (two evenings a week) ; both semesters. Open to all. MR. CRAM.

### HISTORY

- 1 (2 ex.). **MODERN WORLD, 1799-1914.** A survey of the leading political, social, and economic factors which were most influential in producing the world of to-day. Open to all. Three credits (one evening a week for twenty-four weeks) ; first semester and half of second semester. MR. KREY.
- 2 (40a). **RECENT UNITED STATES, 1877-1900.** The political, social, and economic forces of the last quarter of the nineteenth century. Open to all. Prerequisite: 10 credits in history. Two credits (one evening a week) ; first semester. MR. SHIPPEE.

- 3 (40b). RECENT UNITED STATES, 1900-1920. A continuation of History 40a. This course as well as History 40a, may be taken separately. Prerequisite: 10 credits in history. Two credits (one evening a week); second semester. MR. SHIPPEE.
- 4 (60). AMERICAN IMMIGRATION. European background and causes of immigration; European and American legislation with reference to emigration and immigration; political, social, economic, and religious activity of important racial stocks; American attitude to the foreign-born. Prerequisite: 10 credits in history. Two credits (one evening a week); second semester. MR. STEPHENSON.
- 5 (75). THE FOUNDATION OF PRESENT DAY POLITICS. A discussion of the fundamental problems in Europe—social, political, and economic, since 1890. Extensive reading will be expected. Reading knowledge of either French or German will be useful but not required. Prerequisite: 10 credits in history or political science. This course is limited to 20 members. Two credits (one evening a week); first semester. MR. TYLER.
6. GREEK HISTORY. A history of Greece to the death of Alexander the Great, with special emphasis upon its political, social, and economic development. Lectures and assigned reading. Two credits (one evening a week); first semester. MR. CRAM.
7. ROMAN HISTORY. A history of Rome to the death of Constantine in 337 A. D., with special emphasis upon its political, social and economic development. Lectures and assigned reading. Two credits (one evening a week); second semester. MR. CRAM.

### HOME ECONOMICS

- 1 (H.E.3). TEXTILES. This course will include a discussion of those points in fabric study that are of value to both the purchaser and seller of fabrics,—fabric structure, fibers employed in their manufacture, methods of substitution and adulteration, tests for quality, art and economic considerations in their purchase for clothing and household purposes. Two credits (one evening a week); first semester. MISS WELLER.
- 2 (H.E.13). DRESSMAKING. A course in the technique of clothing construction that will give practice in the use of commercial patterns, modeling on the dress form, and application of construction processes. Problems: preparation of a dress form, and the making of a wool dress and tailored silk waist. Two credits (one evening a week); second semester. MISS PATCHIN.

### JOURNALISM

1. NEWS-WRITING. Practice in writing types of stories covered by reporters for metropolitan newspapers. Study of style, structure,



news value, and news-gathering methods, with practice in getting news. Analyses of American newspapers. Four credits (one evening a week); both semesters. MR. BARLOW.

### MATHEMATICS

- 1 (1). HIGHER ALGEBRA. A review and a collegiate treatment of the topic of elementary algebra for those who have had one year of elementary algebra. Not open for credit to those who presented higher algebra for entrance to college. Two credits (one evening a week); both semesters.
- 2 (6). TRIGONOMETRY. Logarithms and plane trigonometry. Prerequisite: Course 1, or high school higher algebra. Two credits (one evening a week); both semesters.

### PHILOSOPHY

- 1 (10). SCIENCE AND RELIGION. A popular discussion of religious problems as affected by contemporary science. Special attention to new contributions as they appear. Two credits (one evening a week); first semester. MR. CONGER.
- 2 (124). POLITICAL AND SOCIAL ETHICS. A study of the ethical basis of society and the state and a consideration of some of the unsettled problems of politics and economics from the ethical point of view. Two credits (one evening a week); first semester. MR. WILDE.
- 3 (129). MODERN POLITICAL THOUGHT. A study of the development of modern theories of the nature, basis, and authority of the state. Beginning with a preliminary sketch of the ideas of Plato and Aristotle, the course will include the most important political theories from the Renaissance to the present. Two credits (one evening a week); second semester. MR. WILDE.

### POLITICAL SCIENCE

1. AMERICAN FEDERAL GOVERNMENT. An elementary course in American government and politics designed for those studying the problems of citizenship, and for teachers. The course treats of the origin and nature of the federal system of government; of the political party system; the federal constitution; structure and organization of the national government; powers and functions of Congress; the executive and the judiciary; the civil service; the regulatory commissions; national finance; the conduct of foreign affairs; war powers of the government. Texts, *American Government and Politics*, by C. A. Beard, and *The New American Government and Its Work*, by J. T. Young. Two credits (one evening a week); first semester.



2. STATE GOVERNMENT. A complementary course to 1 preceding. The constitutional basis of state government; relation of the states to the national and local governments, and to the citizen; organization, functions, and actual workings of state governments, and of county, township, and city governments; public opinion and popular control in state governments; nominations and elections, initiative, referendum and recall; taxation and finance; social and regulatory legislation. Texts, Beard's *American Government and Politics* and *The New American Government and Its Work*, by J. T. Young. Two credits (one evening a week); second semester.
- 3 (158). GOVERNMENT AND BUSINESS. Governmental powers; laissez faire versus regulation; protection against fraud and oppression; restraint of trade and manipulation of prices; protection of debtors; business affected by public interest; qualified property; compulsory benefits; conservation of natural wealth; vested rights; confiscatory legislation; administration of business legislation; reaction of war emergency measures on permanent policy. Two credits (one evening a week); second semester. MR. YOUNG.

### PSYCHOLOGY

- 1 (1-2). GENERAL PSYCHOLOGY. An introduction to the scientific study of the human mind. Two credits (one evening a week); first semester. MR. BIRD.
2. APPLIED PSYCHOLOGY. The practical application of psychology, especially in the field of business. Prerequisite: Psychology 1. Two credits (one evening a week); second semester. MR. FOSTER.
3. ELEMENTARY EDUCATIONAL PSYCHOLOGY. A survey of fundamental facts of human behavior involved in educational activities. Open to qualified students. Two credits (one evening a week); first semester. MR. MILLER.

### RHETORIC AND PUBLIC SPEAKING

- 1 (1). RHETORIC I. Practical training in writing; exposition, narration, and description. Analysis of prose selections and of compositions written by the class. Two credits (one evening a week); first semester. MR. McCLURE.
- 2 (32). RHETORIC II. A continuation of the preceding course, open to those who have had a one-half year course in freshman rhetoric, or its equivalent. Two credits (one evening a week); second semester. MR. McCLURE.
- 3 (11-12). DESCRIPTION AND NARRATION. Principles and practice; analysis of specimens; short themes and fortnightly essays, with emphasis on

- planning and amplification. Open to those who have completed the equivalent of Course 1-2 in college composition and rhetoric. Two credits (one evening a week); first semester. MR. McCLURE.
- 4 (13). EXPOSITION. Literary criticism. A continuation of Course 3. Open to those who have completed the equivalent of three half-years of college rhetoric. Two credits (one evening a week); second semester. MR. McCLURE.
- 5 (41-42). A GENERAL COURSE IN PUBLIC SPEAKING. Extemporaneous speaking based on outlines. Analysis and organization of speech materials. Attention is given to correctness and effectiveness in delivery. Study of model speeches. The course is designed to meet the practical needs of business and professional students. Four credits (one evening a week); both semesters. MR. LINDSLEY, MR. RARIG.
- 6 (81-82). INTERPRETATIVE READING. Interpretation and oral expression of the various forms of literature, the essay, the short story, lyric, and narrative poetry, and the drama. Open to those who have credit for Course 1-2, college composition and rhetoric, and Public Speaking 5 (41-42). Four credits (one evening a week); both semesters. MR. RARIG, MR. GARNES.
- 7 (83). ADVANCED PUBLIC SPEAKING. The distinctive characteristics of oratorical style: analysis of the styles of representative orators. Written and extemporaneous speeches. Individual criticism and direction. Two credits (one evening a week); first semester. MR. RARIG.
- 8 (110). SHORT-STORY WRITING. An advanced course in writing for those who have had experience in writing for publication or have had preliminary training in the technique of writing. Open for credit only to those who have had at least two years of college courses in writing or the equivalent. Four credits (one evening a week); both semesters. MISS NICOLSON, MISS CHASE.
9. STORY-TELLING TO CHILDREN. (1) Story-telling; its place and value; (2) choice of the story; qualities, desirable and undesirable; (3) preparation of the story; application of the short-story ideals of "singleness of impression" and "dramatic struggle"; reconstruction of the story from the child's viewpoint; (4) the problem of delivery; the group consciousness, holding attention, self-effacement, vocal and verbal adaptation. No university credit (one evening a week); first semester. MR. GARNES.
10. PLAY-PRODUCING. Practical work in stagecraft, study of new lighting systems, color schemes, stage sets, examination of new ideals in acting, putting on of one community play; problems in directing

discussed. Analysis of play suitable for high school and college production. Two credits (one evening a week); first semester. Miss MACNAUGHTON.

## ROMANCE LANGUAGES

## FRENCH

- 1 (1-2). BEGINNING FRENCH. Grammar, pronunciation, reading, and practice in speaking. Open to all. Both semesters must be completed before credit is given for the first semester. Eight credits (two evenings a week); both semesters. MR. SIRICH, MR. WATTS.
- 2 (3-4). INTERMEDIATE FRENCH I. Reading, grammar, and composition. French grammar review, readings from modern authors. Open to all who enter the University with two years of French. Both semesters must be completed before credit is given for the first semester. Eight credits (two evenings a week); both semesters. MR. FRELIN, MISS GUINOTTE.
- 3 (8-9). SCIENTIFIC FRENCH. Readings from general works on scientific subjects. The satisfactory completion of this course meets the requirements of the Medical School. Prerequisite: French 1-2. Four credits (one evening a week); both semesters. MR. LUNDBERG.
- 4 (13-14, 16-17). LECTURES IN FRENCH LITERATURE. Four credits (one evening a week); both semesters. Prerequisite: French I. MR. VAN ROOSBROECK.
5. MODERN FRENCH AUTHORS. A study of the works of the French authors of the nineteenth century in English. No credit (one evening a week); first semester. MR. SEARLES.
- 6 (62-63). PRACTICAL FRENCH PHONETICS. Drill in pronunciation. Recitation of passages in prose and verse. Exercises on the phonograph. Prerequisite: French 1-2. Four credits (one evening a week); both semesters. MR. CONSTANS.

## SPANISH

- 1 (1-2). BEGINNING SPANISH. Grammar, pronunciation, reading, and practice in speaking. Open to all. Both semesters must be completed before credit is given for the first semester. Eight credits (two evenings a week); both semesters. MR. OLMSTED, MR. PARKER.
- 2 (3). INTERMEDIATE SPANISH. Readings from modern authors. Grammar review. Composition work devoted chiefly to correspondence and commercial practice. Spanish will be as largely as possible the language of the classroom. Open to those who have had Spanish 1 (1-2) and are approved by the teacher. Four credits (one evening a week); both semesters. MR. CROWLEY.

- 3 (20). **ELEMENTARY SPANISH CONVERSATION AND COMPOSITION.** Pre-requisite, Spanish 1. This course is open to students who have completed the course in Intermediate Spanish. Four credits (one evening a week); both semesters. MR. COBURN.

### SCANDINAVIAN

1. **MODERN NORWEGIAN LITERATURE.** Works in the original of Wergeland, Welhaven, Moe, Björnson, Ibsen, Lie, Kielland will be studied. Also the Landsmaal movement. Two credits (one evening a week); first semester. MR. BOTHNE.
2. **MODERN NORWAY FROM 1814, IN ENGLISH.** Lectures and translated works of modern authors. The aim of the course is to make students familiar with modern Norway. One evening a week; second semester. MR. BOTHNE.
- 3 (45). **SCANDINAVIAN MYTHOLOGY.** A course of lectures and readings dealing with the legends and myths of Viking Scandinavia. The origin of mythological ideas, the story of creation, character and activities of the different divinities, moral concepts, contributions of Scandinavian mythology to literature and art, are the main points of emphasis. Knowledge of Scandinavian not required. Four credits (one evening a week); both semesters. MR. STOMBERG.
- 4 (104-105). **MODERN SCANDINAVIAN HISTORY.** Religious, political, and economic changes in the North; military enterprises and growth of liberalism. Special attention will be given to later industrial development and social legislation. Knowledge of Scandinavian not required. Four credits (one evening a week); both semesters. MR. STOMBERG.
- 5 (107-108). **MODERN SWEDISH LITERATURE.** The Swedish novel. Works in the original of Frederika Bremer, Almquist, Rydberg, Strindberg, Heidenstam, and Selma Lagerlöf will be studied. Some attention will also be given to Swedish poetry of the last half century. Four credits (one evening a week); both semesters. MR. STOMBERG.

### SOCIOLOGY

- 1 (1). **INTRODUCTION TO SOCIOLOGY.** An examination of the evolution of human society from its earliest beginnings to the present, including a discussion of the fundamental factors involved and the social institutions arising during this process, followed by an analysis of some of the leading social problems of the day and a discussion of the psychic and biologic factors involved in human associations. Lectures, reading, discussion. Prerequisite to all other courses in sociology when taken for university credit. Two credits (one evening a week); first semester. MR. BERNARD.
- 2 (6). **MODERN SOCIAL REFORM MOVEMENTS.** A survey of attempts to overcome certain social maladjustments: child labor, the city, bad

housing, poverty, degeneracy; movements for public health, industrial democracy, social insurance, protection of infancy and youth, public recreation, etc. Two credits (one evening a week); first semester. MR. ELMER.

- 3 (14). RURAL SOCIOLOGY. The background and evolution of country life; rural conveniences, communication, coöperation; rural social institutions, especially the family, school, church, and social center; rural leadership, surveys, organization, social agencies. Two credits (one evening a week); second semester. MR. LUNDQUIST.
4. EDUCATIONAL SOCIOLOGY. This course is designed to explain, from the sociological standpoint, what the aims of education are, and what subjects are of most value. Also it is designed to show how education can predetermine the institutions of the future. Two credits (one evening a week); both semesters. MR. FINNEY.
- 5 (100). SOCIAL PSYCHOLOGY. A study of the method by which character, attitudes, and capacities are built up in the individual. A critical examination of the nature and classifications of instincts and of the methods by which habits are constructed under the influence of the various environmental pressures. Designed as a background for students who are particularly interested in problems of social organization and control. Two credits (one evening a week); first semester. MR. BERNARD.
- 6 (101). SOCIAL ORGANIZATION. A study of the social mind and its communication, the problems of democracy, of class and caste, of social conflict and revolution, and of social organization on a rational and scientific basis for social efficiency and progress. Lectures, reading, discussion. Course 1, prerequisite if university credit is desired. Two credits (one evening a week); second semester. MR. BERNARD.
- 7 (102). SOCIAL CONTROL. A study of the social, psychological, and physical factors which control and direct people in their social relationships. Subjects considered are the origin, evolution, and direction of social control, the means and technique of social control, the growth toward rational and scientific social control under the influence of a developing social science, the limits and purposes of social control. Designed for the same class of students as Course 5. Two credits (one evening a week); first semester. MR. BERNARD.
- 8 (114). RURAL SOCIAL INSTITUTIONS. A detailed study of the problems of organization and efficiency of selected rural institutions, especially religious, educational, civic, and recreational. Lectures, discussions, and reports. Two credits (one evening a week); second semester. MR. LUNDQUIST.



- 9 (119). *THE FAMILY*. The evolution of the family; its various forms and their relation to other social institutions; the service of the family in social evolution; contemporary problems of the family (standards of living, birth rate, feminism, etc.). Two credits (one evening a week); second semester. MR. ELMER.
- 10 (120). *SOCIAL PROGRESS*. An examination of the nature and conditions of social progress, involving a study of human nature in its relation to social progress, of the physical and social environments as limiting and stimulating factors in social progress, and of the contribution of modern science to social progress. Various theories of social progress are reviewed and criticized with the purpose of arriving at a tenable theory in the light of present knowledge. Two credits (one evening a week); second semester. MR. BERNARD.
- 11 (140). *HISTORY OF SOCIAL THOUGHT*. Lectures and readings on the main contributions, personalities, and social backgrounds of the leading contributors to social thinking from the times of the Greeks to the middle of the nineteenth century. The main tendencies as well as the individual theories are kept in view and both are related to the circumstances out of which they developed. Such men as Plato, Aristotle, St. Augustine, Dante, More, Bacon, Hobbes, Vico, Montesquieu, Condorcet, Rousseau, Herder, Godwin, Bentham, Saint-Simon, and Comte are given most attention. Particularly recommended for those who wish to understand how our present social ideas came to be. Two credits (one evening a week); first semester. MR. BERNARD.
- 12 (141). *CONTEMPORARY SOCIAL THOUGHT*. Lectures and readings on the main lines of social thought developing within the last fifty years, with especial emphasis upon present tendencies. The chief schools considered are the biological, the environmentalist, the anthropological, the anthropogeographical, the statistical, the economic interpretationists, the anarchists, the social psychologists, the group struggle theorists, the classificationists, the theory of the elite, etc. Due consideration will be given to American sociologists. Two credits (one evening a week); second semester. MR. BERNARD.

### SWIMMING

A course of instruction in swimming will be given in the Women's Gymnasium on the University campus. The course continues through the school year, one hour an evening. Competent instruction is provided. The fee is \$5 a semester. These courses carry no university credit. If the demand arises classes for men will be organized in the University Armory.

Persons taking the courses are required to conform to the regular University rules in regard to the gymnasium and the pool.



1. SWIMMING. Family class with children. One evening a week; first and second semesters.
2. SWIMMING. Beginning class. One evening a week; first and second semesters.
3. SWIMMING. No children. One evening a week; first and second semesters.
4. SWIMMING. Advanced class for women only. One evening a week; first and second semesters.

#### ADDITIONAL COURSES

Many advanced courses not listed in this bulletin will be given upon the request of any responsible individual or group willing to organize a sufficiently large class to insure the success of the undertaking.

# DEPARTMENT OF BUSINESS INSTRUCTION

## PURPOSE

The Department of Business Instruction recognizes the professional status of the business executive. It aims to give prospective executives thorough training for the work they are to undertake. Professional education rather than detailed drill in narrow technical processes is the object toward which instruction is directed. Scientific method in analyzing business data, trained intelligence in dealing with the human relationships with which business is made up, and well-developed sense of moral responsibility will be the foundations of business effectiveness in the future. Experience has proved that those persons whom the department is reaching can, by being actively employed during the day, comprehend and appreciate this course of instruction in a particularly advantageous manner. The courses are conducted in close cooperation with the School of Business of the University.

## INSTRUCTION

The subjects of instruction are divided into three groups of courses of study; namely, those aiding in a preparation for accountancy, those aiding in preparation for banking, and those having for their object a general business training. In each of these courses certain fundamental subjects such as business law, economics, and business English are required.

Upon the completion of one of these courses, a University certificate in accountancy, banking, or general business, as the case may be, will be granted.

## ADMISSION TO COURSES

All persons may be admitted to extension courses provided they are sufficiently mature and can satisfy the instructors in whose classes they wish to register that they are able to carry the work profitably to themselves and without hindrance to the classes. Students who are high school graduates are invited to file, with the University registrar, their regular university entrance requirements so that credits earned in the department may apply toward a university degree as well as toward a departmental certificate. Attention is called to the fact that those persons who are not high school graduates may work off University entrance requirements in several different ways. They may take the Minnesota State High School Board examination, they may pass the University entrance examinations or they may successfully complete the required courses in the Correspondence Study Department of the University. (See University bulletin of general information.) The admission requirements for business students are as follows:

1. Four units of English; or three units of English and four units of a foreign language; or three units of English and two units each of two foreign languages.

2. One unit of algebra and one unit of plane geometry, and enough additional work to make in all fifteen units, of which not more than four may be in Group F.

The term unit means not less than five recitations of forty minutes each week for a school year of at least thirty-six weeks. In manual subjects and kindred courses, it means the equivalent of ten recitation periods a week for thirty-six weeks.

A detailed statement of the entrance subjects required, grouped into six groups, may be found in the University bulletin of general information. The completion of preparatory courses as above outlined will also be accepted by the State Board of Accountancy as the preliminary high school training qualifications required of applicants for the degree of C.P.A.

### CREDITS

The Department of Business Instruction gives credit upon the successful completion of any of its courses. A final examination is required in every instance. Such credit can be applied towards a University certificate in accountancy, finance, or general business, as the case may be, and in addition, where the student has presented university entrance requirements may be applied towards a degree from the School of Business under certain restrictions. For further information on this subject see the University bulletin of general information and the bulletin of the School of Business.

For statement regarding fees, registration, absences, credit, etc., see under heading, General Information, in this bulletin.

### THE HERBERT C. PALIN ADVERTISING PRIZE

Mr. Herbert C. Palin, of Los Angeles, California, has presented a silver loving cup to the advertising class. On this cup is to be inscribed each year the name of the student who, after taking a full year's course in advertising, submits the most constructive plan for an advertising campaign. The cup is to remain in the possession of the winner for one year.

### COURSE IN ACCOUNTANCY

This course is designed to meet the needs of two classes of students, namely, those who wish to prepare to take the state C.P.A. examinations with a view to becoming public accountants, and those who aim to fit themselves for responsible positions with private business firms.

For the student who wishes to pursue either object we recommend that he plan to take the regular course herein outlined and thus secure a broad foundation for his work.

In addition to the courses enumerated below, attention is called to the subjects given in the four-year course of the School of Business, many of which may be taken by correspondence or in evening classes outside of this department. See the announcements of the collegiate and engineering courses, General Extension Division.

Upon the satisfactory completion of this course, the University certificate in accountancy will be granted.

Since the year 1917-18 the course has required a total of 30 credits, each one-semester subject counting for 2 credits, with the exception of the accounting laboratory which counts for one credit. Each subject requires one two-hour class recitation per week for one semester of sixteen weeks with an additional meeting for a final examination.

In order to secure the University certificate in accountancy, 14 credits in accounting are necessary, including Principles of Accounting A, Principles of Accounting B, Accounting Laboratory A, Accounting Laboratory B, Accounting Practice and Procedure A, and Accounting Practice and Procedure B; 6 credits in business law including Business Law A and Business Law B; 2 credits in economics, and 2 credits in business English. The student may elect subjects to cover the remaining 6 credits.

Students of experience and some maturity may join the class by registering as auditors, in case they do not care to secure credit for the course toward a certificate in accountancy. These students will not be called upon to take part in the discussions nor to turn in work which is required of students registering for credit. In this way the University hopes to make available the benefits of the courses to those who feel they lack the opportunity or time to do the work regularly required in the course.

The following subjects are required for the course:

Principles of Accounting A (2)	Auditing A (2)	} Elective
Principles of Accounting B (2)	Auditing B (2)	
Accounting Laboratory A (1)	Cost Accounting A (2)	
Accounting Laboratory B (1)	Cost Accounting B (2)	
Accounting Practice and Procedure A (2)	Business Law A (2)	
Accounting Practice and Procedure B (2)	Business Law B (2)	
	Business Law C, D, or E (2)	
	Economics (2)	
	Business English (2)	
	Elective subjects (6)	

## COURSE IN BANKING AND FINANCE

This course is designed to meet the needs of two kinds of students: (1) those who are preparing for, or who have now engaged in, such financial callings as banking, corporation management, stock and bond brokerage, credit work, or financial journalism; and (2) business men who wish to utilize in the upbuilding of their particular business all of the modern scientific knowledge of a practical financial nature.

### *University Certificate in Finance*

Those students who wish to secure a thoro knowledge of finance, and an adequate knowledge of general business for a financial occupation, are urged to arrange their registration so as to obtain the certificate in finance as offered by the University.

Since the year 1917-18 this certificate has been granted to those who complete a total of 30 credits distributed as follows:

Principles of Economics (2)	Accounting Laboratory A (1)
Banking Practice (2)	Accounting Laboratory B (1)
Investments and Speculation (2)	Business Law A (2)
Corporation Finance (2)	Business Law B (2)
Business English (2)	Business Law C or D (2)
Principles of Accounting A (2)	Elective subjects (8)
Principles of Accounting B (2)	

### *The American Institute of Banking*

The American Institute of Banking recognizes the evening courses of the General Extension Division of the University of Minnesota as fulfilling all the requirements of its educational department. Students who complete these courses in finance are accredited by the institute without further examinations or formality.

By this arrangement, the members of the Minneapolis, St. Paul, and Duluth chapters of the American Institute of Banking may obtain the A. I. B. Certificate upon completion of economics (2 credits), banking (2 credits), and Business Law A, B, C, and D (8 credits).

The advanced courses in finance coincide with the requirements of those who wish to receive the title of associate from the institute for postgraduate study.

## COURSE IN GENERAL BUSINESS

For the benefit of those students who do not care to specialize in either accounting or in finance, yet wish to secure recognition as having completed a definite group of subjects, the following course is arranged. It is likely that certain of the subjects herein outlined will be more fully developed and later, together with the fundamental subjects, form courses in themselves.

It is planned that each of these courses will furnish a preparation for a definite calling, such as advertising, salesmanship, and sales management, railroad traffic, and office management.

### *University Certificate in General Business*

Beginning with the year 1917-18 this certificate will be granted to those who successfully complete a total of 30 credits distributed as follows:

Business English (2)	Principles of Accounting B (2)
Business Law A (2)	Accounting Laboratory A (1)
Business Law B (2)	Accounting Laboratory B (1)
Business Law C (2)	Economics A (2)
Business Law D (2)	Economics B (2)
Principles of Accounting A (2)	Electives (10)



The electives should be selected with a view to specializing in some particular field, as in advertising and selling, in railroad traffic, and the like.

NOTE—It is possible for a student to obtain two of the certificates listed above. However, a second certificate will not be granted until the student has earned an additional 6 credits over the 30 credits required for the first certificate.

## DESCRIPTION OF SUBJECTS

### ACCOUNTING

The various courses in accounting are designed to subdivide the work in order that there may be proper sequence as well as to make possible sufficient emphasis on each phase of the subject. In the first year the subdivision is as follows: first, a series of lectures and discussions in the principles of accounting; and second, the putting of those principles to practical application by the working out of specific problems. Students not desiring to specialize in accounting may elect to omit this latter course, i.e., Accounting Laboratory A and B, but all taking the laboratory courses are required to take the corresponding courses in accounting principles.

1. INTRODUCTION TO ACCOUNTING. This is a course designed for those who are not prepared by experience or training to enroll immediately in Principles of Accounting, but who nevertheless desire to overcome their deficiencies and pursue the regular accounting courses. The course will take up the purposes of accounting, the use of books of original entry, posting to the ledger, the trial balance, closing the ledger, preparation of simple trading statements. No credit. MR. BLANDIN, MR. HOUSTON.
2. PRINCIPLES OF ACCOUNTING A. Fundamental classification of the balance sheet and operating accounts. The books and records primarily essential to disclose the data necessary for such balance sheets and operating accounts. Special discussions on the trading margins, operating expenses, etc. Various bookkeeping and accounting operation, such as accruals, deferred charges; special systems of handling accounting data, such as departmentization of accounts, imprest cash systems, the treatment of controlling accounts and auxiliary ledgers; preparation of simple working sheets and statements. Two credits (one evening a week); first semester. MR. HEILMAN, MR. BLANDIN, MR. HARPER, MR. HOUSTON, MR. RINGHAM.
3. PRINCIPLES OF ACCOUNTING B. Continuation of Principles of Accounting A with more special reference to manufacturing and corporation accounts; treatment of good-will and depreciation, accountant's working sheet; adjusting of surplus, sinking funds, and reserve accounts; drafting condensed balance sheets and income statements. Two credits (one evening a week); second semester. MR. HEILMAN, MR. BLANDIN, MR. HARPER, MR. HOUSTON, MR. RINGHAM.



4. ACCOUNTING LABORATORY A. The working out of practical problems covering the subject-matter discussed in Principles of Accounting A, under the guidance of an instructor. One credit (one evening a week); first semester. MR. BLANDIN, MR. LE BORIOUS, MR. NIEMACKL, MR. SMITH, MR. WHITE.
5. ACCOUNTING LABORATORY B. Work of a similar kind covering the subject-matter discussed in Principles of Accounting B. One credit (one evening a week); second semester. MR. BLANDIN, MR. LE BORIOUS, MR. NIEMACKL, MR. SMITH.
6. ACCOUNTING PRACTICE AND PROCEDURE A. An advanced course for the accounting student following the study of accounting principles. The object of the subject is two-fold: first, to familiarize the student with the peculiar accounting problems of business; and, second, to afford the student the means to secure that necessary insight and skill which practicing accountants must possess in order to meet the demands made upon them. The subject-matter is presented chiefly by means of a more or less exhaustive study of a representative business. The work consists of the following: (a) a study of the distinctive group of accounting problems which are likely to arise in a business organization through a series of years and the scientific solution of those problems; (b) a study of the accounting problems peculiar to representative business. The manner of presenting the subject is essentially practical, the students being required to work out for themselves problems similar to the ones studied. Two credits (one evening a week); first semester. MR. ROTZEL, MR. BLANDIN, MR. HARPER, MR. WAGNER.
7. ACCOUNTING PRACTICE AND PROCEDURE B. A continuation of Course 6. Two credits (one evening a week); second semester. MR. ROTZEL, MR. BLANDIN, MR. HARPER, MR. WAGNER.
8. COST ACCOUNTING A. The elements of cost, i.e., prime cost and indirect expense of burden, kinds of cost accounting, continuous process and production order costs. The materials ledger. Methods of accounting for labor. Methods of distributing indirect or "overhead" expense. The machine rate method, and when applicable. Methods of compensating labor. Predetermined standard costs, and their relation to "scientific management." The cost ledger and its relation to the general ledger.

Modern industry demands that each plant be equipped with adequate accounting facilities for ascertaining the cost of operation. These costs are necessary to show, first, the profitableness of each branch of the industry so as to enable the management to push the profitable and to drop the unprofitable lines, or to place them upon a paying basis; second, the cost of each article as a basis of price-making; third, so far as possible, the cost of each operation, so as to

enable the management to plan economies in the operation of the plant. Two credits (one evening a week); first semester. MR. TUTTLE.

9. COST ACCOUNTING B. A continuation of Course 8. Two credits (one evening a week); second semester. MR. TUTTLE.
10. AUDITING A. This course is essentially practical and is intended only for those whose previous training in the principles of accounting has been sufficient to enable them to be benefited by this advanced work. The chief aim will be to give students the training necessary to enable them to conduct audits and investigations either as private auditors or public accountants; to set up accounts for various purposes as a result of such audits or investigations and to prepare suitable reports thereon. Two credits (one evening a week); first semester. MR. ROTZEL.
11. AUDITING B. A continuation of Course 10. Two credits (one evening a week); second semester. MR. ROTZEL.
12. INCOME TAX PROBLEMS. Course offered to those who have completed Principles of Accounting A and B for the purpose of familiarizing the accounting student with the accounting ramifications of the federal income tax law, and its application to various businesses and also to varying business conditions. The purpose of the course also will be to point out possible errors likely to be made in the preparation of the regular tax reports. Lectures, discussions, and working out of problems. Two credits (one evening a week); first semester.

## BANKING AND FINANCE

21. SURVEY OF FINANCIAL INSTITUTIONS. This course is designed as a general survey of the principles of determining value and price and the inter-relationship of our various financial institutions. It should be of interest to business managers, and to persons specializing in one of the particular fields discussed, who desire a general knowledge of the relationship their particular business bears to our financial system. In addition, it is an ideal course for anyone who desires a knowledge of contemporary financial principles and practices.

The origin, evolution, and functions of money; the principles governing metallic and paper money issues; forms of money in use in the United States, and a consideration of each from the standpoint of scientific principles of issue; the nature and functions of credit and credit instruments; domestic and foreign exchange; the corporation as a device for raising capital; the marketing of securities; foreign investment trusts; the stock exchange; trust companies; savings banks; commercial banks, commercial paper houses and discount companies; government regulation of banking; the Federal

Reserve System; the Federal Farm Loan System; and consumptive credit institutions. Two credits (one evening a week); first semester. Minneapolis; second semester, Minneapolis, if sufficient enrolment. MR. STEHMAN, MR. EBERSOLE, MR. UPHAM.

22. BUSINESS FINANCE. The problem of the business man in financing his operations with particular reference to the corporate form of financial organizations and corporation problems, such as the organization of a corporation; charters and articles of association; directors and officers, manner of their selection, their functions and responsibilities; forms of corporation stocks and bonds and their respective legal and financial characteristics; the marketing of securities; capital and revenue; intangible values; books and accounts; dissolutions, consolidations, and reorganization; trust and holding companies; the taxing of corporations; corporation statistics; the preparation and analysis of corporation reports; the corporation before the law.

Texts will be extensively supplemented by informal lectures, class discussions, and topical essays. Two credits (one evening a week); second semester. Minneapolis and St. Paul. MR. STEHMAN.

23. INVESTMENTS AND THE STOCK EXCHANGE. Bonds, mortgages, endowments, annuities, stocks, and other forms of property in which funds may be invested or risked, with particular emphasis on the needs of the conservative investor. The criteria of a good investment are carefully considered and tested by applying them to specific issues of governments, corporations, and individuals, including railroad, industrial, timber, and mining securities, and real estate loans. Current offerings are utilized, so far as available, as material for the students' investigation. Stock exchange organization and operations are considered to illustrate the methods of speculation, and their effects upon investments and securities, and as affected by money market conditions and the course of business events. Textbook and interpretation of current material in leading financial publications. Two credits (one evening a week); first semester, Minneapolis. MR. EBERSOLE.

24. BUSINESS CYCLES AND FORECASTING. Alternate periods of prosperity and depression are determinable and constitute an important problem for business managers. The volume of business, prices, wages, and interest rates, as well as the prices of securities fluctuate with substantial regularity in these periods.

This course aims to give the student: first, a clear understanding of the sequence of events during a business cycle, and how business changes from depression to prosperity, and from prosperity to depression; and second, ability to find, read, and interpret such barometers of conditions as are readily available for determining the exact position of current events in the cycle. Two credits (one evening per week). Minneapolis. Second semester. MR. EBERSOLE.

25. **BANKING PRACTICE.** Banking from the administrative point of view, under the following topics: origin of banking; classes of modern banks; functions of a bank in aiding industry; organization of a bank; stockholders and directors; bank departments and their administration; deposits and tellers; bank reserves; circulating notes; checks, the clearing house and the transit department; collections; domestic and foreign exchange; problems involved in granting loans; credit department; how banks make a profit; accounting methods and the bank statement; examinations and government supervision; the Federal Reserve System.

This course aims primarily to acquaint bankers with the solution of problems of administration and the methods of operation employed by the most up-to-date banks of this country; and may also give to business men an accurate knowledge of the functions and operation of a bank so that they can use it to the best advantage in their affairs. Two credits (one evening a week); first semester, Minneapolis, St. Paul, and Anoka; second semester, Minneapolis, if sufficient enrolment. MR. POWELL, MR. UPHAM.

26. **FOREIGN TRADE AND FOREIGN EXCHANGE.** The middle west produces almost half of the goods exported from the United States. This course is designed to give a working knowledge of the foreign markets for our goods, how to get in touch with them and the mechanism of foreign exchange which is used in paying and collecting for goods sold. A thoro discussion of foreign exchange fundamentals as well as practice, and current foreign developments as they affect the foreign exchange market. Two credits (one evening a week); second semester, St. Paul (1922-23); Minneapolis, (1923-24). MR. POWELL.

## BUSINESS LAW

NOTE—The subjoined courses in business law give credit toward a University degree only to those students who have earned 6 credits in political science or 6 in economics or 3 in each. Students who have not met these prerequisites may, however, take these courses for credit toward one of the University certificates in business. Specially qualified and mature extension students may petition for University credit.

31. **BUSINESS LAW A—CONTRACTS AND AGENCY.** Contracts: definition of a contract; offer and acceptance; special formality; consideration; capacity of parties; contractual powers of minors, or persons mentally deficient, and of married women; reality of consent, mistakes, misrepresentation, fraud, undue influence, legality of object; the operation of contracts; assignment of contracts; interpretation of contracts; methods of discharging contracts.

Agency: methods of forming agencies; methods of terminating agencies; the rights and obligations of principals, agents, and third parties. Text, lectures, and class discussion. Two credits (one

evening a week); first semester. MR. CHAPIN, MR. CHILD, MR. GLICK, MR. PALMER, MR. RUMBLE.

This course is fundamental and must be completed before registration will be accepted for other courses in business law.

32. BUSINESS LAW B—SALES AND NEGOTIABLE INSTRUMENTS. Sales: sales of personal property; definition of a sale and its distinction from a bailment; when the title passes to the buyer; what title passes; rights of the seller (a) to set the contract aside on the ground of fraud, (b) to enforce lien for the purchase money, (c) to obtain stoppage in transit; rights of the purchaser (a) to demand goods of a certain quality, (b) to demand warranty of the purchaser's title.

Negotiable instruments: nature and characteristics (a) definitions and characteristics, (b) uniform negotiable instruments law; form; (a) what a negotiable instrument must and must not contain, (b) non-essential, (c) effect of blanks and delivery; negotiation: (a) negotiation, indorsement, and delivery, (b) holder in due course and his rights; maker's and acceptor's contract: (a) maker's contract on a promissory note, (b) acceptor's contract on a bill of exchange, (c) presentment of a bill of exchange for acceptance; drawer's and indorser's contract: (a) drawer's contract on a bill of exchange, (b) indorser's contract on a bill or note, (c) presentment for payment, (d) notice of dishonor, (e) protest, (f) checks, (g) position of indorser after liability is fixed. Text, lectures, and class discussion. Two credits (one evening a week); second semester. For those who have completed Course 31. MR. CHAPIN, MR. CHILD, MR. DULEBOHN, MR. GLICK, MR. RUMBLE.

33. BUSINESS LAW C—PARTNERSHIPS AND CORPORATIONS. BANKRUPTCY. Partnerships: formation of partnerships; articles of co-partnerships; methods of terminating partnerships; rights and obligations of partner (a) toward his co-partners, (b) as an agent of the firm, (c) toward the firm's creditors, (d) for an accounting; special partners; limited partnerships.

Joint stock companies: how distinguished from ordinary partnerships; how like ordinary partnerships; statutory requirements.

Corporations: formation of corporations of various classes; termination of corporations; membership in corporations, methods of transferring interest. fraudulent issuance of stock by corporate officers; rights of stockholders (a) to dividends, (b) to inspect and control corporate affairs; liability of stockholders (a) on stock subscriptions, (b) to pay assessments, (c) for the corporate debts; the doctrine of ultra vires; rights and obligations of corporate directors; corporate mergers and consolidations; domestic and foreign corporations.

Insolvency and bankruptcy proceedings. Discharge in bankruptcy. Text, lectures, and class discussions.



For those who have completed Course 31. Two credits (one evening a week); first semester. MR. SMILEY, MR. KENNY, MR. PALMER.

34. BUSINESS LAW D—REAL PROPERTY AND MORTGAGES. Real property: estates in land, estates held jointly or in common, equitable estates, relative rights of adjoining owners, trespass, easements, sales of real property, the contract to sell, conveyances, wills, mortgages, and liens; landlord and tenant, the lease, assignment and subletting, rent, and remedies for non-payment; abstracts, title, insurance, Torrens titles. Two credits (one evening a week); second semester. MR. SMILEY, MR. KENNY, MR. PALMER.

### ECONOMICS AND COMMERCE

- 41 (1a). ELEMENTS OF ECONOMICS. A fundamental course in economic principles as a basis for the study of current economic problems. Two credits (one evening a week); first semester. MR. CUMMINGS, MR. MYERS.
- 42 (B). ECONOMIC PROBLEMS. Current problems of importance will be studied, for example: business cycles and industrial depressions, taxation, labor organizations, combinations and monopoly, immigration, international trade, and others. Two credits (one evening a week); second semester. MR. CUMMINGS, MR. MYERS.

NOTE—Economic Problems may be taken before Elements of Economics, but credit for it will not be granted until the elementary course has been successfully completed.

43. PRINCIPLES OF BUSINESS MANAGEMENT. Principles of organization showing comparative values and uses of line, staff, and combination types. Methods of saving time, money, and energy in the moving of work and materials. Making a scientific analysis of a particular operation, the operation of a department, and the operation of a plant. How to make use of the analysis in reducing waste, time, energy, money, and material. Principles underlying the establishment and maintenance of the improved methods and conditions obtained by the above study. These principles include a method of determining upon proper and clearly defined policies and a study of their use and value; the necessity for, and proper means of profiting by the experience of others. How to develop business judgment in yourself and your subordinates. The principles governing executive control and the maintenance of discipline; discussion of methods of determining upon a wage scale and legitimate profits; the relation of physical condition to success, and its bearing upon production. Some principles underlying proper management of finances. The relation of home management to industrial and commercial efficiency; the organization and management of the sales department; training the sales-



man. The general problem of selection of help with a brief outline of a modern system of scientific selection and placement by a study of individual characteristics. No credit toward a degree, 2 credits for certificate in business (one evening a week); first semester.

51. **ELEMENTARY ADVERTISING.** This course is intended for those who desire sufficient knowledge of the elements of advertising to prepare reasonably satisfactory copy for newspapers, magazines, street car cards, circulars, and booklets. The fundamental elements of display, layout, headings, and copy are carefully outlined and the student is given practice in the preparation of advertisements.

This course is intended to acquaint the student with what may be called "the tools of advertising" before he undertakes either of the two advanced courses in the planning and preparation of advertising campaigns. No credit toward a degree, 2 credits for certificate in business (one evening a week); first semester. MR. MARTIN.

52. **NATIONAL ADVERTISING.** A study of advertising from a new angle. The student puts himself in the place of one having a product for sale, and from the first lesson to the last each lecture is so planned as to give the methods pursued in conducting the many different steps in an advertising campaign.

The student first analyzes the product from the standpoint of its advisability. He considers the planning of a trademark, the organization of the sales force, the selling points, the prices, and the profits. He then thoroly analyzes the market, chooses the advertising medium most adaptable to his particular campaign, and decides on the appropriation.

Students will be furnished with pamphlets for these lectures which will give reference to practically everything which has so far been published on subjects taken in the course. In this way the experience of probably three hundred of the leading advertising men of this country will be available to the student. No credit toward a degree, 2 credits for certificate in business (one evening a week); second semester. MR. MARTIN.

61. **SALESMANSHIP.** A course for insurance men, specialty men, traveling salesmen. Lectures and demonstrations on the principles underlying successful salesmanship, as follows: the proper approach; securing attention; arousing interest; creating desire; closing the sale; the psychology of salesmanship; the use of suggestion in selling; the use of argument.

The chief feature of the work will be the demonstration sales. So far as possible each student will be given an opportunity to take part in a sufficient number of demonstrations that he may apply the principles laid out in the course. No credit for degree, 2 credits for certificate in business (one evening a week); each semester.

71. **RAILWAY TRAFFIC AND RATES.** A practical study of the Act To Regulate Commerce and the other laws and regulations covering the transportation of property, locally and in foreign commerce, both by rail and by water. The student is acquainted with the correct compilation and interpretation of freight tariffs and economical and efficient methods in shipping. The lectures are comprehensive and embrace rate-making bases, the classifying and tracing of freight, the preparation of claims, etc. Rulings of the Interstate Commerce Commission and of the various state commissions are referred to and rates are quoted from current tariffs and classifications. Four credits (one evening a week); both semesters. MR. CRELLIN.

### ENGLISH AND SPANISH

81. **BUSINESS ENGLISH.** Not a lecture course nor a dry, prosy study of technical English grammar and composition, but a new practical course designed for business men and women who recognize the value of a command of English for business and everyday writing and conversation. The main object of the course is to acquaint the student with the various types of business letters, reports, etc., and to teach him how to write and use them effectively. A secondary object of the course is to show students how training in expression—written or oral—is primarily training in thinking and analysis and hence is a very real stimulus to general business efficiency. The types of letters to be studied include complaint and answer, reminder, acknowledgment, recommendation, application, collection, form, follow-up, sales, interdepartmental, and composite. Students will be expected to write letters and take part in the weekly discussions of actual problems in business correspondence. Ability to write simple, grammatically correct English is a prerequisite to this course. No credit toward a degree, two credits for a certificate in business (one evening a week); first semester. Repeated second semester. MR. CONLEY, MR. SHADBOLT.
82. **PUBLIC SPEAKING.** For description see Department of Collegiate Instruction. (One evening a week); both semesters.
90. **SPANISH.** For description see Department of Collegiate Instruction. One evening a week; both semesters.

### MATHEMATICS

100. **MATHEMATICS OF BUSINESS A.** A practical course dealing with the mathematical operations peculiar to business transactions. The subject-matter will consist of percentage, simple interest, compound interest, discount, use of interest tables, theory and practice of logarithms, elements of the theory of annuities certain, use of annuity tables, application of annuities to problems on amortization, sinking

funds, bond valuation, and building and loan associations. This is essentially a problem course in which the methods brought into use are developed by illustrative examples. Prerequisite: high school algebra. Two credits (one evening a week); first semester. MR. HART.

101. MATHEMATICS OF BUSINESS B. A continuation of Course 100 which deals with applications of annuities in more advanced types of problems selected from various fields of finance and taxation. An introduction is given to the mathematics of life annuities and their applications in pension, endowment, inheritance problems, and life insurance. Prerequisite: Course 100. Two credits (one evening a week); second semester. MR. HART.

### DENTAL MECHANICS

A course in dental mechanics is offered by the General Extension Division in coöperation with the College of Dentistry. This course extends over a period of one college year beginning with the fall quarter. It requires for admission completion of eighth grade work and a minimum age of eighteen years except in cases of students who have completed one or more years of high school work.

The expenses for this course include a tuition fee of \$50 a quarter or \$150 for the year; and approximately \$150 additional for instruments.

The course of study includes the following: prosthetic technique: a course of lectures, recitations, and laboratory technique covering equipment and arrangement of the dental laboratory, impression materials, study models, vulcanite and metallic dentures. Courses of lectures and laboratory work covering the following subjects: oral anatomy, crown and bridge work, operative technique, and orthodontia technique, with their practical application in the dental infirmary.

Upon the successful completion of the course the University certificate for dental mechanics will be granted.

## DEPARTMENT OF ENGINEERING INSTRUCTION

The demand for men specially trained in engineering has been steadily increasing each year. Every branch of the profession has been calling for the services of trained men. By trained men is meant those who can plan work and use good engineering judgment in any given project.

To meet this demand the General Extension Division now offers groups of courses in architecture, civil engineering, electrical engineering, and mechanical engineering. These course groups are arranged to be completed in either three- or four-year periods and are planned primarily for workers in industrial establishments.

The subject of engineering is one that requires very thoro study, and no step should be neglected. These courses have been laid out with great care, and are especially adapted to the needs of men working in shops and other industrial and manufacturing establishments, to the end that such men may have added to their practical training a technical and theoretical knowledge which will enable them to advance more rapidly in their chosen line of work.

It has been found that many persons register who can not take the work with any great profit to themselves because of inadequate preparation. For this reason it is desirable that students should consult with the director of the General Extension Division before taking up any course, so that they may have proper guidance and direction.

Students who have had sufficient preparation need not start at the beginning, but may take up the work at the point where they can pursue it with advantage.

These courses also offer an opportunity to college graduates who may wish to specialize in some subject not covered in their regular college work.

When a student completes any one of the consecutive courses, and has a total of 30 credits, a certificate in engineering from the University of Minnesota will be granted.

For statement regarding fees, registration, absences, credit, etc., see under heading, General Information, in this bulletin.

### THREE-YEAR COURSE

The following courses are arranged to be completed in three years of three evenings a week. Students, however, may adapt the number of evenings a week to their own specific circumstances, bearing in mind that the total number of semester credits required for a certificate is 30.

### ARCHITECTURE

#### FIRST YEAR

##### *First Semester*

Elementary Architectural Design  
Shop Mathematics I

##### *Second Semester*

Elementary Architectural Design  
Shop Mathematics II

## SECOND YEAR

*First Semester*

Intermediate Architectural Design  
Shop Mathematics III

*Second Semester*

Intermediate Architectural Design  
Mechanics, Strength of Materials

## THIRD YEAR

*First Semester*

Advanced Architectural Design  
Structural Design

*Second Semester*

Advanced Architectural Design  
Reinforced Concrete

This makes a total of 24 credits. The student is permitted to elect other acceptable subjects to bring the total to 30.

## CIVIL ENGINEERING

(For Office Men)

## FIRST YEAR

*First Semester*

Shop Mathematics I  
Mechanical Drawing

*Second Semester*

Shop Mathematics II  
Structural Drafting

## SECOND YEAR

*First Semester*

Shop Mathematics III  
Applied Mechanics  
Structural Design

*Second Semester*

Shop Mathematics IV  
Strength of Materials  
Structural Design

## THIRD YEAR

*First Semester*

Reinforced Concrete  
Theory of Engineering  
or  
Roof-Trussed Bridges Design  
Shop Mathematics V

*Second Semester*

Reinforced Concrete Design  
Theory of Engineering  
or  
Bridge and Building Design  
Shop Mathematics VI

## CIVIL ENGINEERING

(For Field Men)

## FIRST YEAR

*First Semester*

Shop Mathematics I  
Mechanical Drawing

*Second Semester*

Shop Mathematics II  
Structural Drafting

## SECOND YEAR

*First Semester*

Shop Mathematics III  
Plane-Surveying  
Lettering and Sketching

*Second Semester*

Shop Mathematics IV  
Stadia and Topographical Surveys  
or  
Plotting and Calculation  
Curves and Earthwork  
Mapping

## GENERAL EXTENSION DIVISION

## THIRD YEAR

*First Semester*

Highways  
or  
Municipal Engineering  
Theory of Engineering

*Second Semester*

Railways  
or  
Municipal Engineering  
Theory of Engineering

Students in civil engineering are advised to take up the study of calculus. This course is not required; but it will prove of great advantage to anyone who desires to do more advanced work later.

There are certain options allowed the student depending largely upon the work he intends to follow. This information must be furnished the General Extension Division at the time the student registers and his options will then be given him.

## ELECTRICAL ENGINEERING

## FIRST YEAR

*First Semester*

Shop Mathematics I  
Elementary Electricity I  
Experimental Electricity

*Second Semester*

Shop Mathematics II  
Elementary Electricity II  
Experimental Electricity

## SECOND YEAR

*First Semester*

Alternating Currents I  
Shop Mathematics III  
Mechanical Drawing  
or  
Applied Mechanics  
or  
Experimental Electricity  
Physics

*Second Semester*

Alternating Currents II  
Shop Mathematics IV  
Mechanical Drawing  
or  
Strength of Materials  
or  
Experimental Electricity  
Physics

## THIRD YEAR

*First Semester*

Direct Current and Alternating Current Machinery  
or  
Telephony  
Shop Mathematics V  
Electrical Machine Design

*Second Semester*

Central Power Stations  
or  
Telephony  
Shop Mechanics VI  
Electrical Machine Design

## MECHANICAL ENGINEERING

## FIRST YEAR

*First Semester*

Shop Mathematics I  
Mechanical Drawing  
Physics

*Second Semester*

Shop Mathematics II  
Mechanical Drawing  
Physics



## SECOND YEAR

*First Semester*

Shop Mathematics III  
 Applied Mechanics  
 Mechanical Drawing—Advanced  
     or  
 Electricity—Elementary  
     or  
 Heat Engines

*Second Semester*

Shop Mathematics IV  
 Strength of Materials  
 Mechanical Drawing—Advanced  
     or  
 Plumbing  
     or  
 Heating and Ventilating

## THIRD YEAR

*First Semester*

Shop Mathematics V  
 Machine Design  
     or  
 Theory of Engineering  
 Testing Materials  
 Advanced Mechanics

*Second Semester*

Shop Mathematics VI  
 Machine Design  
     or  
 Theory of Engineering  
 Steam-Engine Testing  
     or  
 Gas-Engine Testing  
 Advanced Mechanics

## DESCRIPTION OF COURSES

1. ARCHITECTURAL HISTORY. Twelve lectures illustrated with lantern slides, covering the ancient and Renaissance periods. One evening a week; second semester. MR. FORSYTHE.
2. ELEMENTARY ARCHITECTURAL DESIGN. Shades and shadows and wash rendering. Architectural elements such as doors, windows, moldings, and the architectural orders; general drawing, exercises, and lectures in the application of these elements to simple problems in design and a survey course of lectures in architectural history illustrated by lantern slides. Open to high school students who have had mechanical drawing, to those who have one year or more in an architect's office, and to those who, in the opinion of the instructors, have had equivalent experience. Two evenings a week; both semesters. Monday and Thursday evenings, 7:30-9:30. MR. FORSYTHE.
3. INTERMEDIATE ARCHITECTURAL DESIGN. Regular Class B "Analytique" or order problems of the Society of Beaux Arts Architects, or equivalent designs in architectural problems from the regular course of the University of Minnesota. Open only to those who have completed Course 2, or who have had two years or more in an architect's office, or have had equivalent preparation in an architectural school. Two evenings a week; both semesters. Monday and Thursday evenings, 7:30-10:00. Fee, \$7.50 a problem, or \$15 a semester. MR. FORSYTHE.
4. ADVANCED ARCHITECTURAL DESIGN. Class B, plan problems, and Class A, problems of the Society of Beaux Arts Architects, or equivalent design problems from the regular course in Architecture at the University of Minnesota. Open only to those who have completed the

- required "Analytique" or order problems, or to those who have had one or more years of design in any architectural school. Two evenings a week; both semesters. Monday and Thursday evenings, 7:30-10:00. Fee, \$7.50 a problem, or \$15 a semester. MR. ARNAL.
- NOTE—Regular instruction will be given on Monday and Thursday evenings, but students in these classes may work in the drafting rooms of the Architectural Department on other evenings, except Sunday.
5. **FREE-HAND DRAWING.** Drawing and painting from life and from casts, with lectures on the construction of the human figure and its application to decoration. Students completing both semesters will be taught how to make etchings. One evening a week; both semesters.
  6. **MAP-DRAWING.** (a) Farm and city plats. (b) Real estate display maps. (c) Landscape architect's maps. (d) Topographic and hydrographic symbols. One evening a week; second semester. MR. ZELNER.
  7. **LETTERING AND TITLES FOR ENGINEERS.** Principally free-hand Reinhardt lettering. Title lay-outs and lettering. One evening a week; first semester. MR. ZELNER.
  8. **PLANE-SURVEYING.** Elements of plane-surveying relating to methods of chain, compass, transit, and stadia surveys; leveling; methods of keeping field notes; determination of area of irregular plots; computation and plotting of field notes; care, use, and adjustment of instruments; methods of subdivision of the United States; public lands. One evening a week; first semester. MR. CUTLER.
  9. **CURVES AND EARTHWORK.** Mathematics of simple, compound, and spiral curves; preliminary and location surveys; plotting of profiles; vertical curves; cross-sectioning and computation of earthwork volumes; methods of computation of overhaul; mass diagram, right-of-way and station ground maps. One evening a week; second semester. MR. CUTLER.
  10. **CONCRETE MATERIALS: SELECTION AND TESTS.** This course will cover the selection of materials entering into concrete, their properties and the tests to be applied. A study will be made of the proper combinations to obtain the best mixtures for given constituent materials at the lowest cost. Local materials will be used and those pursuing the course will make their own specimens and perform all the tests. One evening a week; first semester. MR. LAGAARD.
  11. **REINFORCED CONCRETE.** Covers the elements of the theory and practical design of reinforced concrete structures, including floors, roofs, walls, columns, foundations, and retaining walls. One evening a week; both semesters. MR. MANEY.

12. **STRUCTURAL DESIGN.** This course will include a treatment of structural mechanics and stress computation, and the elements of the principles and practice governing the design of tension and compression members, beams, girders, and columns. Prerequisite: an elementary working knowledge of mathematics through trigonometry, and some knowledge of elementary physics. One evening a week; both semesters. MR. MANEY.
13. **ELEMENTARY ELECTRICITY.** This course will start with the simple laws of magnetism and advance through the theory of direct current machinery. Special attention will be given to direct current motors and generators, armature windings, commutators, and wiring diagrams. The course will be of value to those who wish to take up the study of alternating current machinery and power plants. Lesson sheets will be provided and demonstration experiments made. One evening a week; both semesters. MR. MARTIN.
14. **ALTERNATING CURRENTS.** This course is planned to meet the need for an elementary course on alternating current circuits and machines. General principles will be closely associated with the machines, the methods, and the facts of present day practice. Theoretical demonstrations and discussions will be supplemented by a certain amount of laboratory work. The course will cover series and parallel circuits, single and polyphase systems, power and power factor. Transformers, induction motors, alternators, synchronous motors, rotaries, single-phase motors, and transmission lines. One evening a week; both semesters. MR. RYAN.
15. **ADVANCED ALTERNATING CURRENTS.** This course is a continuation of Course 14. It deals in a more extensive manner with the various phases of alternating currents. Open to students who have completed Course 14 or its equivalent. One evening a week; both semesters. MR. RYAN.
16. **DIRECT CURRENT LABORATORY.** This course is provided for those students who desire a course of experimental work to aid them in understanding direct current theory. The laws of magnetism and direct current circuits will be thoroughly illustrated in experiments performed by the student himself. Machine characteristics will be studied for several types of motors and generators. One evening a week; both semesters. MR. SWENSON.
17. **CENTRAL STATIONS.** Electric power generating and distributing systems; demand, diversity, and load factors; load diagrams; voltage regulation; protective apparatus; selection of prime movers and units; methods of charging and metering; maintenance of plants; emergencies. One evening a week; first or second semester. MR. RYAN.

18. **TELEPHONE APPARATUS.** Nature of voice sounds, frequency, and wave length. Construction and operation of receivers, transmitters, inductance and repeating coils, and the electro-magnet as used in telephony. Primary and storage batteries, ringing machines, and pole changers. Signalling equipment, including magnetos, ringers, and central energy lamp or visual signals. The treatment will be elementary, using only simple mathematics, altho some previous knowledge of alternating currents and trigonometry would be very helpful. One evening a week; first semester. MR. SWENSON.
19. **TELEPHONE CIRCUITS.** Subscribers' sets for magneto and common battery exchanges. Magneto and common battery circuits. Circuit and blue print reading. Cable codes, cable and line-testing. Inductance and capacity of lines, aerial and cable construction. Traffic studies, and multiple switchboard arrangements. Prerequisite, Course 18, or its equivalent. One evening a week; second semester. MR. SWENSON.
20. **INTRODUCTION TO RADIO.** A non-mathematical discussion of apparatus and methods used in radio communication, including practice in reading circuits and diagrams, use and operation of crystal and vacuum tube receiving sets, and of wave meters. Lectures, demonstrations, and recitations for non-technical students. Open to those who have had Course 50, or high school physics. One evening a week; both semesters. MR. TODD.
21. **ELECTRICAL MACHINE DESIGN.** This course will cover the design of transformers, alternators, motors, and generators. The work will include calculation of all dimensions and predetermination of operating characteristics. Prerequisite: a knowledge of alternating currents and elementary mathematics. One evening a week; both semesters. MR. KUHLMAN.
22. **SHOP MATHEMATICS I.** This course is designed to meet the needs of shop men, and affords an opportunity to take up engineering work of a higher grade. Practical shop problems will be thoroly discussed. This course together with one in drafting is essential for all other engineering branches. It will cover the subject of fractions, decimals, percentage, weights of materials, areas and volumes, thread-cutting, gearing, belts and pulleys, the milling machine, and a general drill in equations and the use of formulae. One evening a week; first semester. MR. EDWARDS.
23. **SHOP MATHEMATICS II.** This is a continuation of Shop Mathematics I, and will take up the subjects of algebra and geometry. One evening a week; second semester. MR. EDWARDS.
24. **SHOP MATHEMATICS III. TRIGONOMETRY.** This course is designed for those who have had the subjects of algebra and geometry and wish to

pursue civil engineering studies. The solution of right and oblique triangles will be thoroly discussed and practical plane-surveying problems will be given special attention. One evening a week; first semester. MR. EDWARDS.

25. SHOP MATHEMATICS IV. ANALYTIC GEOMETRY. This course is of great importance to the engineering student who wishes to take up the study of calculus. It consists of the study of the straight line, circle, ellipse, parabola, hyperbola, and a few of the higher plane curves met with in practice. One evening a week; second semester. MR. EDWARDS.
26. SHOP MATHEMATICS V. CALCULUS. This course is open to those who have completed mathematics through analytic geometry. Stress will be laid upon the various derivatives and their application to tangents, normals, evolutes, involutes, and maximum and minimum. Engineering examples will be given whenever possible. One evening a week; first semester. MR. EDWARDS.
27. SHOP MATHEMATICS VI. This is a continuation of Shop Mathematics V and will take up the subject of integration. Important mechanical and electrical problems will be introduced and discussed in class. One evening a week; second semester. MR. EDWARDS.
28. TRIGONOMETRY. This course is designed for those who have had the subjects of algebra and geometry and wish to obtain a fundamental knowledge of trigonometry, facility in handling trigonometric expressions and formulae, and to be able to solve right and oblique triangles. Special attention is given to the uses of trigonometry as applied in practical work. One evening a week; first semester. MR. PRIESTER.
29. ANALYTIC GEOMETRY. This course is a continuation of the course in trigonometry and is peculiarly adapted to the needs of those students who wish to continue further study in mathematics. It consists of the study of the properties of geometrical figures, the straight line, circle, ellipse, parabola, hyperbola and empirical equations. One evening a week; second semester. MR. PRIESTER.
30. ELEMENTARY APPLIED MECHANICS. A short, practical course in elementary mechanics designed to meet the needs of students who have had a limited training in mathematics. Numerical calculations, simple graphical calculations, forces, simple machines, work, power, and energy. One evening a week; first semester. MR. BROOKE.
31. ADVANCED MECHANICS. Statics, resolution of forces, moments, theory of couples, conditions of equilibrium, free body method, catenary, and allied subjects. For students who have completed calculus. One evening a week; first semester. MR. WILCOX.



32. **ADVANCED MECHANICS.** Dynamics of a particle, center of gravity, moment of inertia, kinematics of circular, harmonic, and curvilinear motion in general, work, energy, and power. One evening a week; second semester. MR. WILCOX.
33. **STRENGTH OF MATERIALS.** An elementary course on the strength of materials, designed to follow the course in applied mechanics. The subjects to be treated are: the properties of materials, stress and strain, elastic and ultimate strength, deformations, principle of moments, moments of inertia, simple stresses, sheer, riveted joints; the general elementary theory of beams, columns, and shafts. One evening a week; second semester. MR. BROOKE.
34. **TESTING OF MATERIALS.** Investigation of the physical properties of various metals and other engineering materials, including the more common grades of commercial steels, wood, cement, concrete, ropes, cables, belting, chains, etc. Supplemented by lessons on the various materials of construction and standard methods of testing. One evening a week; first semester. MR. HOLMAN.
35. **STEAM ENGINE AND POWER PLANT TESTING.** This course is intended for stationary engineers who wish to become more efficient in their line of work. The course will consist of lessons supplemented by experimental demonstrations illustrative of certain portions of the work. Actual problems arising in power plant testing will be worked out in class with complete explanations and instructions for their solution. The laws of mechanics, heat, power, work, and energy will be applied to engine and power plant testing. One evening a week; first semester. MR. SHOOP.
36. **GAS ENGINES.** This is a practical course in the theory of construction and operation of the gas engine. It will include various types of engines, cycles, ignition, carburetion, cooling, oiling, methods of determining horse power, etc. One evening a week; first semester. MR. ROWLEY.
37. **GAS ENGINE TESTING.** A practical laboratory course in gas engine testing in which the student will perform tests on the various types of gas engines, as stationary, oil- and kerosene-burning engines, automobile, aeroplane, and tractor motors. The student must supply himself with a notebook in which records will be kept of the various tests. One evening a week; second semester. MR. ROWLEY.
38. **HEAT ENGINES.** This is an elementary course required for all engineering students. It relates especially to the steam and boiler, the steam turbine, and the gas engine. Attention is given to the different types of engines, boilers, and gas engines. The general problem of a modern power plant is considered for the benefit of those who do not devote further time to the subject. One evening a week; both semesters. MR. SHOOP.



39. **BOILER ROOM PRACTICE.** This course has been designed for the benefit of the persons who have charge of boiler plants. It is important for janitors in charge of schoolhouses and apartment houses as well as factory boiler shops. It will be beneficial to those who are expecting to obtain a license as a boiler inspector. One evening a week; first semester. MR. MARTENIS.
40. **ADVANCED BOILER ROOM PRACTICE.** This is a continuation of the preceding course and will take up the subject of the steam engine and its accessories. This course is of interest to those seeking a chief engineer's license. One evening a week; second semester. MR. MARTENIS.
41. **PLUMBING.** This course is designed to meet the needs of the practical shop man and will cover the principles of plumbing and the best practice in use at the present time. It is hoped that a standard text will be available. One evening a week; second semester. MR. MARTENIS.
42. **HEATING AND VENTILATING.** The course will cover present heating and ventilating practice and is designed for heating contractors and others desirous of obtaining a fundamental knowledge of the subject. The plan of instruction includes a study of heat; methods employed for heating and ventilating buildings of various kinds; piping systems and temperature regulation. One evening a week; first semester. MR. MARTENIS.
43. **STEAM FITTING.** This course will cover steam-using machines and equipment. Particular emphasis is placed on heating appliances and refrigerating machines. One evening a week; first semester. MR. MARTENIS.
44. **ELEMENTARY MECHANICAL DRAWING.** A beginning course in drafting. Use of instruments and drawing materials, lettering, tracing, view drawing, dimensioning and working drawings of machine parts. One evening a week; both semesters. MR. FRENCH.
45. **TEACHERS' COURSE IN MECHANICAL DRAWING.** A special course offered to those who teach drawing in grade and high schools and who wish to acquaint themselves better with standard drafting room practice. One evening a week; both semesters. MR. FRENCH.
46. **MECHANICAL DRAWING FOR WOMEN.** This course is similar to Course 36 with the exception that more emphasis is laid on lettering and tracing at the option of the student. One evening a week; both semesters. MR. FRENCH.
47. **COST ESTIMATING.** Analysis of construction from the blue print plans for purposes of estimating quantities and costs. Labor and material costs. Study and analysis of costs of concrete, steel, timber, and

brick construction, piling, roads, pavements, excavation and transportation, equipment and plant rental, overhead, general costs and profit. Actual cost estimates of current engineering construction such as buildings, bridges, culverts, excavation, roads, pavements, etc. Lectures, classroom problems and discussions. No drawing outfit is necessary. However, a working knowledge of blue print reading is desirable. One evening a week; both semesters. MR. FRENCH.

48. **ADVANCED MECHANICAL DRAWING.** A practical course in drafting and drafting room methods taking up the detail of machine parts as fastenings, screws, bolts, rivets, and rivet joints; keys, cotters, and pins; pipe and pipe fastenings; bearings and journals, pulleys and belting; spur gears, bevel gears, and spiral gears; cams, link motions, etc.; the application of empirical design and the principles of mechanics; assembly, diagrammatic and layout drawings. It is assumed that the student has a previous knowledge of drawing equivalent to Course 44. One evening a week; both semesters. MR. HERRICK.
49. **MACHINE DESIGN.** An elementary course in the calculation and design of machines and machine parts; such as machine frames, shafting, fly wheels, pulleys, riveted and screwed fastenings, bearings, spur gearing, bevel gearing, and helical gearing. Lectures and drawing room practice of practical problems will be given. Prerequisite: previous knowledge of drawing equivalent to Course 44 and mathematics through Course 24. A working knowledge of elementary physics, Course 50, and strength of materials, Course 33, is desirable. One evening a week; both semesters. MR. HERRICK.
50. **PRACTICAL PHYSICS.** This course will consist of lectures and laboratory work in general physics designed to meet the needs of technical students. Stress will be laid primarily on the sections of mechanics, heat, and electricity. Such a course will be of great advantage to the student who wishes to proceed with the subjects of technical mechanics, strength of materials, and general electric problems. Geometrical optics, sound, and the general principles of radio-activity and X-rays will also be taken up. One evening a week; both semesters. MR. WILCOX.
51. **ENGLISH FOR ENGINEERS.** A course in practical English, designed to meet the professional needs of engineering students. The material of this course will include business letters—about twelve types; reports; estimates; instructions, etc. Some attention will be given to oral English. The underlying purpose of this course is to acquaint the student with the various kinds of business letters, reports, etc., and to teach him how to prepare and use them effectively. A secondary purpose is to show the prospective engineer that training in expression—written or oral—is training in clear, straight thinking and hence is a real stimulus to general efficiency. Students will be

expected to do a certain amount of writing and take part in the weekly discussions of problems bearing upon the work of the course. Ability to write simple, grammatically correct English is a prerequisite to this course. One evening a week; both semesters.

52. **THEORY OF ENGINEERING.** A general course given to those students who have had two years' training in engineering work. This course includes the practical application of the fundamentals to engineering problems. Only students who have taken Courses 12, 13, 22, 23, 24, 25, 30, 33, 34, 44, 50, are eligible. Kent's *Mechanical Engineer's Pocket Book*, *Machinery Hand Book*, or Mark's *Mechanical Engineers' Hand Book* will be used as a text. The design of a simple machine will be taken up and discussed. One evening a week; both semesters. MR. EDWARDS.
53. **HIGHWAYS AND PAVEMENTS.** Elementary course relating to the economics, location, construction, and maintenance of highways and pavements, also a study of road-building materials, and methods of testing. One evening a week; both semesters. MR. LANG.
54. **MUNICIPAL ENGINEERING.** Development of municipal public works. City-planning, transportation, and housing. The principles of public health and sanitation. Public water supplies, sewerage and sewage disposal, refuse collection and disposal, and the sanitation of buildings. One evening a week; both semesters. MR. BASS.
55. **WATER POWER AND ELEMENTS OF HYDROLOGY.** Types of low, medium, and high-head developments. Details of developments; spillway dams; hollow reinforced concrete dams, arch dams, high masonry dams, movable dams. Turbine settings and characteristics. One evening a week; both semesters. MR. BASS.
56. **ADVANCED REINFORCED CONCRETE DESIGN.** A course in the theory and design of structures planned to meet the needs of graduate students who wish to go into the subject more thoroly. Reinforced concrete arches, framed structures, continuous beams, culverts, and circular pipes, which involve statically indeterminate methods for solutions to obtain correct moments and shears will constitute the problems to be considered. Enough of the theoretical work will be done to make possible accurate calculations of moment and shear forces. The design of resisting sections will be studied from a critical point of view, and applications made of the most recent developments in reinforced concrete design methods and materials. One evening a week; both semesters. MR. PARCEL.
57. **FOUNDRY PRACTICE.** This is a semi-technical course dealing with everyday foundry problems from a technical standpoint. It is designed to link up the practical with the technical in the simplest manner possible. It will appeal especially to foremen, clerks,

mechanics, and any person interested in foundry practice, who has had the equivalent of a common grade-school education. The course will cover the following subjects: drawing, materials, metallurgy, sands, refractories, fluxes, foundry economies, foundry machinery, and office practice. One evening a week; both semesters. MR. POTTER.

58. SHOP METHODS. This course is laid out to give men interested in shop work a general knowledge of the processes and machines used in shops. Opportunity will be given to operate the various types of machines. A series of demonstrations will cover the following subjects: machine shop, forge shop, pattern shop, and foundry. One evening a week; first semester. MR. RHAME.

### TRADE AND INDUSTRIAL TRAINING

1. METHODS OF ESTABLISHING TRAINING DEPARTMENTS IN FACTORIES AND STORES.
2. SHEET METAL DRAFTING FOR TINSMITHS AND SHEET METAL WORKERS.
3. SCIENTIFIC METHODS OF HANDLING AND TESTING LABOR.
4. CAUSES AND CURES OF INDUSTRIAL UNREST.
5. BUSINESS AND FACTORY MANAGEMENT.
6. FOREMAN'S COURSE IN HANDLING LABOR.
7. EMPLOYMENT MANAGEMENT.

For description of these courses see Department of Collegiate Instruction.

## CERTIFICATE HOLDERS

### CERTIFICATE HOLDERS OF 1917

On May 25, 1917, the following persons were granted University business certificates in the courses indicated:

#### *Certificates in Accounting*

Bayley, Charles S., Minneapolis	McHenry, Robert D., Minneapolis
Cottor, Emil F., St. Paul	Schwartz, Solomon, Minneapolis
David, Charles A., Minneapolis	Smith, Arthur V., Minneapolis
Haselbeck, Henry, St. Paul	Wing, Llewellyn F., Minneapolis
Loberg, James M., Minneapolis	Wood, George, Minneapolis

#### *Certificates in General Business*

Gruber, J. Jeffry, St. Paul	Kennedy, Thomas F., Minneapolis
	Rose, Carrol H., Minneapolis

#### *Certificates in Finance*

Berry, Harry E., Minneapolis	Johnson, Evan M., Minneapolis
Danielson, Andrew W., St. Paul	Jones, Earl R., Minneapolis

### CERTIFICATE HOLDERS OF 1918

On May 28, 1918, the following persons were granted University business certificates in the courses indicated:

#### *Certificates in Accounting*

Erbalang, Alphonse A., St. Paul	Linnerooth, Sidney, St. Paul
Gustafson, Victoria, Minneapolis	Nimmerfroth, Gertrude, Minneapolis
	Welliver, Le Roy, Minneapolis

#### *Certificates in General Business*

Corcoran, John J., St. Paul	Melamed, Louis, St. Paul
	Schaffelke, Henry A., St. Paul

#### *Certificates in Finance*

Oberg, Ezra, Minneapolis

#### *In Absentia*

Hauge, Arthur, Certificate in General Business	Shannon, Thomas, Certificate in Accounting
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### CERTIFICATE HOLDERS OF 1919

On May 26, 1919, the following persons were granted University business certificates in the courses indicated:

#### *Certificates in Accounting*

Gothé, Oscar E., St. Paul	Melamed, L. M., St. Paul
Johnson, Lillian P., Minneapolis	Schmal, G. P., Minneapolis

#### *Certificates in General Business*

Barton, A. D., Minneapolis	Ekblad, E. G., Minneapolis
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## CERTIFICATE HOLDERS OF 1920

On May 25, 1920, the following persons were granted University business certificates in the courses indicated:

*Certificates in Accounting*

Anderson, C. A. L., St. Paul	Chailquist, F. R., Minneapolis
Anderson, R. W., Minneapolis	Gadacz, Stanley J., St. Paul
Barton, A. D., Minneapolis	Kulp, Delmar C., Minneapolis
Benson, J. Raymond, Minneapolis	Schilling, P. A., Minneapolis

*Certificates in Finance*

Haselbeck, Henry, St. Paul

*Certificates in General Business*

Elmquist, Nan C., St. Paul

## CERTIFICATE HOLDERS OF 1921

On May 31, 1921, the following persons were granted University business certificates in the courses indicated:

*Certificates in Accountancy*

Blandin, A. A., St. Paul	Kjelsberg, Clara, Minneapolis
Buctow, Herbert P., St. Paul	LeBorions, William, St. Paul
Doe, Richard H., St. Paul	Munson, Clifford A., St. Paul
Ekblad, E. G., Minneapolis	Oberg, Ezra N., Minneapolis
Hauge, Arthur W., Minneapolis	Wright, Ethel J., Minneapolis
Huffman, H. H., Minneapolis	Wright, William W., Minneapolis

*Certificates in Finance*

Jensen, Ernest W., Minneapolis	Kulp, Delmar E., Minneapolis
Peterson, Clarence A., Minneapolis	

*Certificates in General Business*

Bolstad, Alfred C., Minneapolis	Lee, Reynold, Minneapolis
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On May 31, 1921, the following persons were granted University engineering certificates:

*Certificates in Engineering*

Livermore, Harvey J., St. Paul	Staehle, Gilbert C., Minneapolis
Ryan, James L., St. Paul	Trierweiler, Dominic G., St. Paul

## CERTIFICATE HOLDERS OF 1922

On May 29, 1922, the following persons were granted University business certificates in the courses indicated:

*Certificates in Accountancy*

Berry, Harry Edwin	Dirba, Charles A.
Cuzner, Dorothy	Epstein, Israel
Conklin, Oscar	Heller, George



Jacobson, John A.  
Jarbee, John F.  
Klason, Iver T.  
Kittelsen, Olga  
Neison, Hugo E.

Potter, Roy K.  
Rychman, Joseph  
Sidletsky, John  
Silverman, Mitchell  
Whear, F. B.

Williams, James E.

*Certificates in General Business*

Phillips, Grace C.

Swanson, Albert F.

On May 29, 1922, the following persons were granted University engineering certificates:

*Certificates in Engineering*

Bastis, Emil Thomas  
Batzli, Oscar Hugo  
Bovaird, Ellis Livermore  
Dohbs, Loyle Duncan  
Elmund, George E.  
Kolar, James L.

Leppla, Lester Byron  
Lewis, Herbert Nathan  
Nimis, Carl Albert  
Rydell, Maurice George  
Strandberg, Henry J.  
Wallop, Arthur Louis

Wardner, Francis Dana

# SUMMARY OF STUDENT SEMESTER

## REGISTRATIONS FOR THE YEAR 1921-22

Minneapolis collegiate .....	2,719	
Minneapolis business .....	1,851	
Minneapolis engineering .....	859	
		<hr/>
		5,429
St. Paul collegiate .....	994	
St. Paul business .....	759	
		<hr/>
		1,753
Duluth collegiate .....	314	
Duluth business .....	214	
		<hr/>
		528
Thief River Falls business.....	48	48
Bemidji business .....	44	44
		<hr/>
Total number of student semester registrations.....		7,802
Total number of individuals taking work 1921-22 was....		4,847
Total collegiate registrations.....	4,027	
Total business registrations.....	2,916	
Total engineering registrations.....	859	
		<hr/>
		7,802

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The General Extension Division now offers nearly one hundred fifty collegiate, business, and vocational courses for home study by correspondence.

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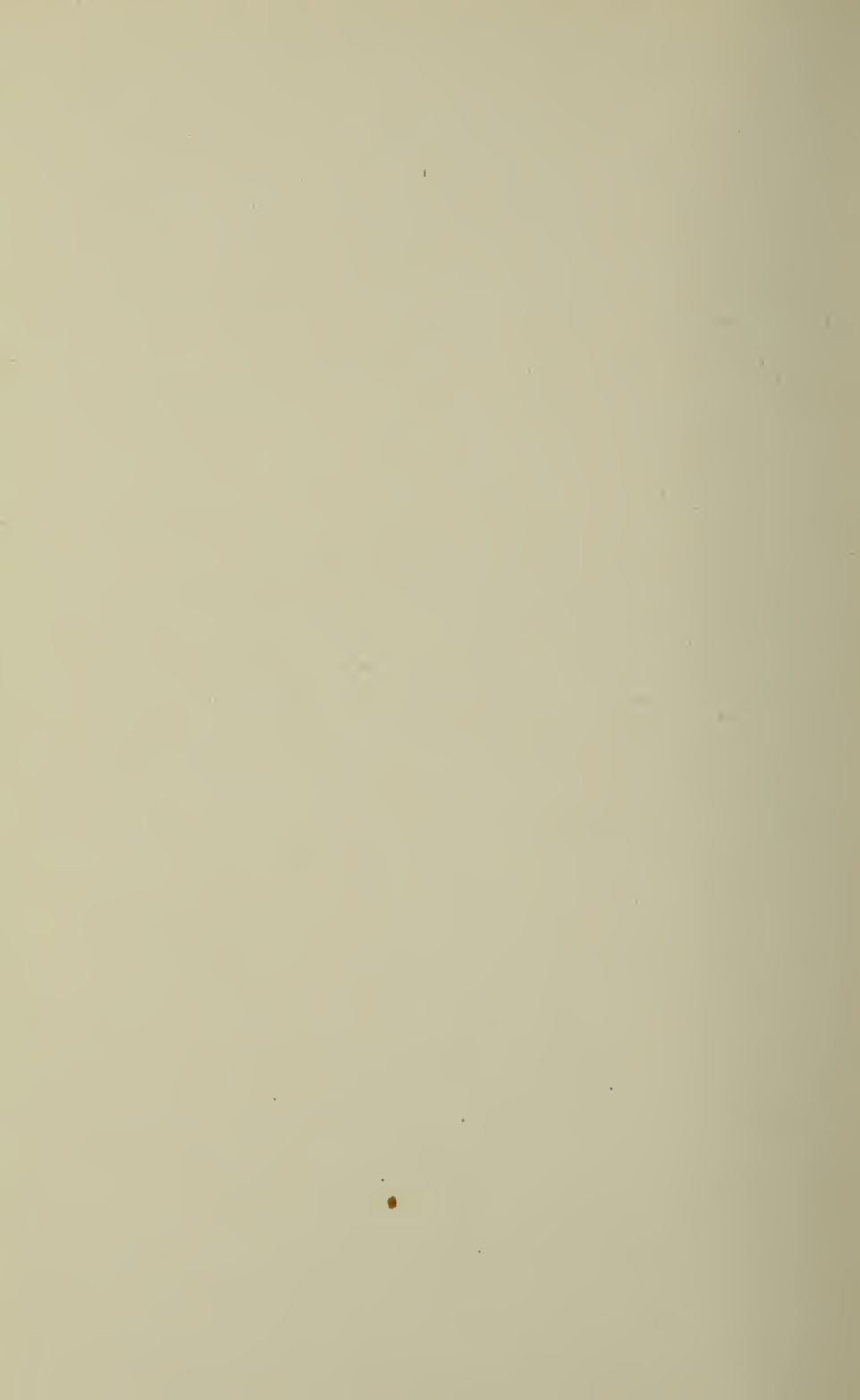
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GENERAL EXTENSION DIVISION  
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